



AKTIVNO OTROŠTVO - VZVOD ZA USPEŠNO ŽIVLJENJE
ACTIVE CHILDHOOD - THE LEVER OF A SUCCESSFUL LIFE

Zbornik povzetkov
The Book of Abstracts



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Univerzitetna založba **Annales**

KOPER 2017

9. mednarodna znanstvena in strokovna konferenca
Otrok v gibanju

The 9th International Scientific and Professional Conference
A Child in Motion

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AKTIVNO OTROŠTVO – VZVOD ZA USPEŠNO ŽIVLJENJE
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9. Mednarodna znanstvena in strokovna konferenca z mednarodno udeležbo Otrok v gibanju, Portorož, 2.–4. Oktober 2017

The 9th International Scientific and Professional Conference with International Participation A Child in Motion, Portorož, 2nd–4th of October 2017

Zbornik povzetkov z recenzijo
The book of abstracts with a review

Uredniki/Editors: Matej Plevnik, Tadeja Volmut, Boštjan Šimunič, Rado Pišot

Tehnična urednika/Technical editors: Alenka Obid, Matej Plevnik

Oblikovanje in prelom/Design and Typesetting: Alenka Obid

Izdajatelj/Publisher: Znanstveno-raziskovalno središče Koper/Science and research centre Koper, Slovenia

Za izdajatelja/Publisher represented by: Rado Pišot

Založnik/Publishing house: Znanstveno-raziskovalno središče Koper, Univerzitetna založba Annales, Slovenia / Science and research centre Koper, Annales University Press, Slovenia

Za založnika/Publishing house represented by: Rado Pišot

Sedež/Adress: Garibaldijeva 1, 6000 Koper, Slovenia

Elektronska publikacija – dostopna na naslovu: www.ovg.si in www.zrs-kp.si/monografije

Electronic publication, available at: www.ovg.si and www.zrs-kp.si/monografije

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Kataložni zapis o publikaciji (CIP) pripravili v Narodni in univerzitetni knjižnici v Ljubljani

[COBISS.SI-ID=291980800](https://nbn-resolving.org/urn:nbn:si:zgb:COBISS.SI-ID=291980800)

ISBN 978-961-6964-85-2 (pdf)

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Vsi povzetki prispevkov so bili predhodno pregledani in recenzirani.
All abstracts were pre-screened and reviewed.

Recenzenti / Reviewers: izr. prof. dr. Boštjan Šimunič, doc. dr. Tadeja Volmut, doc. dr. Matej Plevnik, Armin Paravlič, doc. dr. Uroš Marušič, Saša Pišot, Giuliana Jelovčan, doc. dr. Črtomir Matejek, Stojan Puhalj, dr. Katja Koren, doc. dr. Mitja Geržević

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PLENARNA PREDAVANJA/
PLENARY SESSION

IMPACT OF PHYSICAL AND MOTOR COMPETENCES ON THE INTEGRATED DEVELOPMENT OF CHILDREN

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Basic Premise. The integrated development of children is an area-based comprehensive development focusing on positive child-centred improvements in family, school and community environments. The possible associations of physical activity and exercise with cognitive functioning and academic performance in children have been increasingly investigated in recent years.

Problem. Currently, it is well established that both cognitive and motor abilities followed similar developmental time tables with an accelerated progression in the kindergarten and elementary school years. For children, school environment is very important, in order to offer them a rate of physical activity which is positively affecting the developmental level of their motor and cognitive competences. Here, the aim of this study was to investigate the limits of these researches and what effects it might have on the future practice to reach the integrated development of children through the educational system.

Methods. A systematic review was used to present an examining for both the benefits and risks associated with physical activity from the perspectives of exercise science and educational psychology.

Findings. It was shown, an increasing in the association between promoting physical activity and developing cognitive control involving inhibition, working memory, and cognitive flexibility where these 3 aspects provide the foundation for academic ability. Additionally, physical activity and fitness are reported to have effects on executive functions of children. Moreover, the impact of physical fitness and physical activity on the development of physical and mental health of children is significantly demonstrated. On the

other hand, the consequences of excessive sedentary behaviour are growing and are significantly related with cardiovascular risk and many of childhood diseases.

Conclusions. It can be asserted that fostering physical activity, in both kindergarten and early primary school is recommended to enhance motor and cognitive development. In addition, these findings support the idea of an integrated curriculum at schools in order to maximize the benefit from the study of comprehensive topics (i.e., focuses on all domains of learning: social-emotional, physical, intellectual, and communication (language and literacy) during the primary school age and its impact on the integrated development of children.

Keywords: physical activity; fitness; intellectual development; integrated curriculum

Key references:

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ENGAGEMENT OF SCHOOL CHILDREN IN SPORTS SYSTEM IN SERBIA: Present and the Future

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Introduction. Competitive sport today is recognized by the strength of the organization and by the achieved results. It confirms a nation's cultural wealth and strengthens general national interest and represents a particular country in the world. That is the main reason why the Serbian Constitution defines sport as category of special social interest. Modern way of life, with all modern technologies, is the main reason why young people are more and more physically inactive. It is the fact that physical inactivity of youth has negative influence on physical health, social and spiritual development and generally negatively influences biological potential of a nation. Engaging young people in the system of sport could be one of the basic models of prevention against physical inactivity. This is the reason why one of the goals of the strategy of development of sport in the Republic of Serbia is to make sport generally accepted and desirable model of social behaviour, especially for schoolchildren. The aim of this research was to define the current quantitative characteristics of primary school children's engagement in sports system in Serbia.

The method. This research has been realized as systematic non-experimental survey. The sample consisted of 6774 elementary school pupils, from 1st to 8th grade (3419 boys and 3355 girls) from four different regions in Serbia (Vojvodina, Belgrade and two central Serbian regions). The results were analysed by the method of descriptive and regression statistic.

The results with discussion. The results of the participants have revealed that pupils generally attain actively 41 different sport, which means that they participate in 35.04% of all sports. The boys were active in 35 and girls only in 32 of all sports recognized by the relevant law of Republic of Serbia. The overall prevalence of children not participating in the sport system was 45.29%, as follows: 38.29% with boys and even 52.43% with girls. The ma-

majority of boys from the analysed sample are engaged in football (26.59%), whereas the highest number of girls choose volleyball (14.99%). Unfortunately, it was established that in the course of school education there is no statistically significant trend of change of prevalence of participation of the elementary school children in sports system of the Republic of Serbia (Boys - $R^2 = 0.0109$, $p = 0.806$; Girls - $R^2 = 0.00002$, $p = 0.992$), i.e., the value of the regression coefficient of the change trend of prevalence of participation in sports system with schoolchildren in 1st to 8th grade was -0.299 with the boys, whereas it was 0.0085 with the girls.

Conclusion. The results of this research showed initial quantitative data about elementary school children involved in the system of sport in R Serbia. Based on the results it can be concluded that more than a half of the elementary school children in Serbia are engaged in the sports system and that the prevalence of non-participation is statistically significantly higher in girls compared to boys. The regression analysis results showed that in the course of elementary school, both the physical education system and the system of school or competitive sport absolutely do not affect in any way the change of prevalence of participation of the observed children population in the sports system in the Republic of Serbia.

Keywords: physical activity, sport, elementary school, prevalence

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PRESSURES OF THE PHYSICAL SCHOOL ENVIRONMENT AND THEIR POTENTIAL IMPACT ON THE MENTAL AND MOTIONAL FUNCTIONING OF CHILDREN

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Introduction. Participants in the pedagogical process are constantly under the influence of many pressures. In the educational area, these pressures are primarily the result of learning, however the pressures, which are the result of the physical working environment itself, are also important and should be noted. The very consideration of these pressures presents an ever-more important factor in the context of the modern educational process, as the disregarding of these elements can also be a longer-term health problem.

Problem and results. As the starting point of the lecture we will take the results of a research which examined the influence of different pressures of the working environment (climate, light and noise) on the performance of work assignments in the early adolescence period. Because of the complexity of the measurements, the research consisted of a smaller sample of 20 male adolescents (N=20) with an average age of 13.5 years (SD=0.25). For the research we used tasks which demanded higher attention to work from the adolescent boys and in this context applied the basic theory of the “rare” signal detection. The research was performed in artificially created conditions, a “climate chamber”, which enabled a wide variety of settings for various work conditions. We performed 360 measurements for each effect and all possible interactions. Of all three stress factors in the work environment, the only significant one was noise ($p < .001$).

Conclusion. The conclusion that we can also predict the influences of the work environment pressures on the elements of work efficiency of children is particularly interesting and can be applied on many areas.

In the lecture we will touch the theoretical and research-practical starting points, how the ergonomics functionality inside the physical school en-

vironment is one of the more important elements of didactics efficiency on the mental and on the motional field of child functioning.

OBREMNITVE FIZIČNEGA ŠOLSKEGA OKOLJA IN NJIHOV POTENCIALNI VPLIV NA MENTALNO IN GIBALNO FUNKCIONIRANJE OTROK

Uvod. Danes se velikokrat niti ne zavedamo, da smo kot udeleženci pedagoškega procesa neprestano pod vplivom številnih obremenitev. V edukacijskem prostoru so te obremenitve v prvi vrsti posledica učenja, neznemarljive pa so tudi obremenitve, ki so posledica samega fizičnega delovnega okolja. Upoštevanje slednjega vsekakor predstavlja vse pomembnejši dejavnik v kontekstu sodobnega izvajanja vzgojno-izobraževalnega procesa, saj je neupoštevanje teh elementov lahko tudi dolgoročnejši zdravstveni problem.

Problem in rezultati. v predavanju bomo vzeli kot izhodišče rezultate raziskave, ki je imela za nalogo proučiti vpliv različnih obremenitev delovnega okolja (toplotnega, svetlobnega ter zvočnega) na opravljanje delovnih nalog, ki so jih izvajali mladostniki v obdobju zgodnje adolescence. Raziskava je zaradi kompleksnosti meritev zajela manjši vzorec 20 adolescentov moške populacije (N=20), starih povprečno 13.5 let (SD=0.25). Za takšno proučevanje smo uporabili naloge, ki so bile takšne vrste, da so zahtevale od otrok povečano pozornost pri delu in v svojem kontekstu upoštevale osnove teorije detekcije redkih signalov. Raziskava je potekala v umetno ustvarjenih pogojih klima komore, kar je omogočalo veliko raznovrstnost nastavitvev pogojev dela. Za posamezni vpliv in vse možne interakcije smo opravili 360 meritev. Ugotovili smo, da je izmed vseh treh obremenilnih faktorjev delovnega okolja edini signifikanten prav hrup ($p < .001$).

Zaključek. Ugotovitev, da lahko vpliv obremenitev delovnega okolja na elemente delovne uspešnosti otrok, tudi napovedujemo je še posebej zanimiv ter ga lahko apliciramo na več področij. Izhajajoč iz tega se bomo v predavanju tudi dotaknili širših teoretičnih ter raziskovalno-praktičnih izhodišč, kako je upoštevanje ergonomske funkcionalnosti znotraj fizičnega šolskega delovnega okolja eden od vse bolj pomembnih elementov didaktične učinkovitosti tako na mentalnem, kot tudi na gibalnem področju funkcioniranja otrok.

PLAYNESS FLOWERS – AN INNOVATIVE METHODOLOGY FOR CREATING MOVEMENT GAMES FOR CHILDREN

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Playness pedagogy merges movement, play, knowledge, and values into holistic unity, which is communicated to the children age 2-9 in the form of storytelling. Playness flowers methodology is following fundamental principles that must be taken into account when dealing with movement literacy. These principles are summarized in the form of compass. Playness compass is a didactical tool based on the theory of change as proposed by the ancient philosopher Aristotle. Deriving from four core principles of the playness compass, we have invented a methodology of how to create movement games for preschool and primary school children. Playness flowers methodology has been proven as an excellent tool in providing a systematic curriculum of physical literacy with extensions to other areas of child's development. For the purpose of quality assurance in movement literacy and to support the teachers with ideas and administration of reporting, a web application is being used. In our paper, we will discuss the theory of physical education and justify the need to move from the concept of motor learning towards kinesthetic one. It is our intention to use philosophical argumentation for changing the discursive attention towards the quality of movement that is manifested as kinesthetic intelligence of the organism as a whole. Thus the motor development is meaningfully placed as an integral part of a much more complex matrix of a living being, which is constantly in relation to its inner and outer environment.

PLAYNESS ROŽICE - INOVATIVNA METODOLOGIJA USTVARJANJA GIBALNIH IGRIC ZA OTROKE

Playness pedagogika združuje gibanje, igro, znanje in vzgojne vrednote v enovito celoto, ki jo preko gibalnih zgodbic posredujemo otrokom med drugim in devetim letom. Metodologija playness rožic sledi osnovnim načelom, ki jih mora upoštevati vsak pedagog/vzgojitelj, ko posreduje gibalne vsebine. Ta načela povzema playness kompas. Playness kompas je didaktično orodje, ki je utemeljeno s teorijo spremembe, kot jo je opredelil starogrški filozof Aristotel. Iz teh načel pa smo razvili inovativno metodologijo ustvarjanja gibalnih vsebin, ki služi strokovnim delavcem v vrtcih in šolah kot odlično orodje pri izvajanju sistematičnega gibalnega opismenjevanja, vključujoč širok spekter vsebin iz različnih področij otrokovega razvoja. V podporo kakovostnemu gibalnemu opismenjevanju pa pri playness pedagogiki izkoriščamo tudi računalniški program, ki omogoča spremljanje opravljenega dela in lajša administrativno poročanje. V prispevku se bomo poglobili v teorijo telesne vzgoje na način, ki utemeljuje potreben premik od motoričnega učenja k kinestetičnemu. Gre namreč za to, da s pomočjo filozofskega diskurza preusmerimo pozornost k kakovosti gibanja, ki se manifestira kot kinestetična inteligenca, ki usklajuje notranje in zunanje okolje posameznika. Na ta način osmislimo motorični razvoj znotraj kompleksnejšega prostora organizma kot žive celote, ki je stalno v aktivnem razmerju do okolice.

INCREASING POSTURAL DEFORMITY TRENDS AND BODY MASS INDEX ANALYSIS IN SCHOOL AGE CHILDREN - HOW TO IMPROVE THE FACTS

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The aim. The aim of this study was to analyze the possible increase in deviations of the correct posture and Body Mass Index in populations of school children aged 5-14, during the implementation of IPA “SpineLab” project granted by the European Commission. The grant is realized according to the importance of public health issues. With this analysis the applicable parameters of posture and Body Mass Index were also analyzed, which were recorded and measured at the same time. The results showed that there is a significant difference between age groups for the measured variables ($F=9.27$; $p < 0.01$; $\eta^2 = 0.26$) suggesting moderate difference across age span. The present study demonstrated that children across age span from 5 – 14 years of age tend to differ in height, BMI and postural status as it was presumed. Highest diversification was observed for body height and Body Mass Index which is a normal body development trend in healthy children. The study results showed that there is a negative trend of increasing Body Mass Index within the first and youngest age group. The fact is that a trend of increasing deformity of the shoulder belt has been noted, often inclines towards the formation of milder forms of kyphotic posture. Other forms of deformity that are accentuated in the survey results is the negative trend of increasing pelvic rotation, and pelvis rotation, which inclines towards the formation of lordotic posture for all three age groups.

Questions are: How to improve the facts, given by study results? Is that parent’s dissemination about importance of corrective exercise, or importance of prophylactic exercise? Is the children’s motion, in different ways, crucial for healthy developments? Can we do better?

Key words: Spinal screening, Public health, Prevalence rate, Changing trend

PHYSICAL ACTIVITY AND OBESITY IN YOUTH

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Introduction. “Overweight and obesity are a major health problem in adults as well as in children and adolescents, with serious medical and psycho-social consequences due to the important diseases and related risk factors. Juvenile obesity is particularly alarming because it is considered to be a key predictor for obesity in adulthood, and its prevention and treatment have a remarkable clinical relevance. Engagement in physical activity has emerged as a critical intervention in obesity at the different ages of life. Physical activity plays a central role in obesity management by increasing energy expenditure (EE) and hence contributing to a negative energy balance, and promoting fat oxidation (Fox) by exercising muscle, which is known to be impaired in obese individuals.

Methods. The objectives of the presentation are to show and compare the metabolic responses to treadmill (TM) and cycle ergometer (CE) exercise in obese adolescents.

Results. At comparable heart rate (HR), oxygen uptake, EE and Fox are higher, and lactate (LA) concentration lower, during TM than CE, suggesting that cycling imposes a metabolic involvement at the level of the single active muscles greater than walking. Therefore, due to different physiological responses to TM and CE, walking is more convenient than cycling in obese adolescents, permitting to attain the same EE at lower HR, with lower blood LA concentration and with greater Fox.

Conclusions. These conclusions seem clinically relevant when using exercise as a part of multidisciplinary treatment for juvenile obesity and amelioration of related metabolic disturbances”.

BILATERAL TESTING AND MOTOR LEARNING EFFECTS

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Introduction. Recently, bilateral testing has become a sophisticated tool in sports diagnostics. A possibility of correct diagnosing of bilateral performance in some sports is directly connected with competition success, while in others ambidexterity is an important segment of sports tactics. It is crucial to incorporate bilateral testing in an earlier stage of training for young athletes, when effective monitoring as well as correcting errors and performance improvement on both body sides is optimal. Implementing bilateral testing in a regular training program of young athletes will allow an effective extrinsic feedback during the motor learning process and a guideline for training and improving the weaker body side if necessary. To conclude, these facts are important segments of a well-timed selection in sport.

Problems and Aims. Bilateral transfer, as an effective motor learning process, refers to a transfer from a limb on one side of the body to the limb on the opposite side of the body – contra lateral limb, and it could be explained in accordance with cognitive and physiological approach. Therefore, practical implementation of bilateral testing among children is conditioned by scientific investigations, especially by construction and validation of sport-specific bilateral tests which can contribute to complete extrinsic feedback with a pointed level of performance. For this purpose, all sport-specific tests must be in accordance with the technical requirements of different sports activities and with the outcomes of the motor learning process. According to the previously set research problem, this paper shall be focused on analyzing the following: 1) Bilateral testing of fundamental movement skills; and sport – specific 2) Bilateral testing of football skills - influence on the motor learning effects; 3) Bilateral testing in Taekwondo (TKD) influence on performance; 4) Ambidexterity assessment in rhythmic gymnastics (RG).

Results and Discussion. There is two main reasons way bilateral testing and measuring ambidexterity should be a part of common sports testing.

Firstly, the fact that left-handed and right handed people are able to develop motor skills in their non-dominant side should be considered as an advantage in the training process in order to obtain better sport results. Secondly, ambidexterity can significantly improve performance and increase a chance of success in competition in some sports. Presented and discussed results are segments of a scientific project entitled Measuring Motor Skills in Kinesiology. In accordance with the research of construction and validation of fundamental movement skills, a newly designed, metrically correct bilateral test of fundamental movement skills, can be an adequate tool for selecting processes in sports with required ambidexterity, monitoring of the motor learning process of bilateral fundamental motor skills and tracking of trainability of the non-dominant body side. Furthermore, the investigation is obtained with aim of analyzing the effectiveness and efficiency differences during motor learning of football specific motor skills among school aged children, depending on the type and frequency of extrinsic feedback. According to the obtained results, the main conclusion could be drawn as follows: prescriptive feedback is a more effective way of learning basic football motor skills. The dominant side of the body needs more frequent feedback during the motor learning process. While learning a motor skill with the non-dominant body side (after mastering the skill with the dominant side), rare feedback is more effective than the frequent one. According to the analyzed functional and dynamical aspects of asymmetry in TKD, the influence of motor ability laterality is gender specific and it should be further investigated. The usage of the coefficient of asymmetry is a suitable tool for assessing the ambidexterity in TKD. Also, TKD specific ambidextrous performance is determined by a higher level of explosive power, strength and flexibility. In RG, the technical mastery can be evaluated according to the coefficients of asymmetry, stability, and versatility. Better ambidexterity is noted among females, nevertheless, male performance is based on ambidexterity and female performance is based on flexibility.

Conclusion. Bilateral testing has become a necessary part in sports diagnostics of young athletes as crucial feedback and outcome of motor learning process, an indicator of the level of performance and sport-specific ambidexterity, and a guideline for selection in sports attend ambidexterity.

Key words: ambidexterity, extrinsic feedback, learning outcomes, selection

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INTERACTION OF PHYSICAL FITNESS, ACADEMIC ACHIEVEMENT AND LIVING ENVIRONMENT OF PRIMARY SCHOOL STUDENTS

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Basic premise. The main aim of our research was to determine whether there is an interaction between physical fitness, academic achievements and living environment of primary school students. The findings of previous researches are contradictory in this regard, so we decided to do research in our environment. We assume that better physically fit students will also have better academic achievements, which should apply to children from urban and rural environments.

Problem. In recent years, a number of studies have been carried out to find out how physical activity is related to various aspects of cognitive activity and academic achievements. Much less researches exist in which the relationship between physical fitness and academic achievements was studied. Physical fitness represents various motor abilities that enable physical activities. Researches show that in terms of improving human health, physical fitness is more important than the time spent in physical activity. For this reason, we decided to explore the association of physical fitness and academic achievements. We will also examine the differences in living environment.

Methods. A research sample comprised of 307 children from the 4th and 5th grade who attended three urban in three rural primary schools. Physical fitness was measured using eight tests of SLOfit, on the basis of which the total score was calculated. We obtained data of academic achievement on the basis of grades in Mathematics, Slovene, English, Society and Science with technique. On the basis of the collected grades, we calculated the total average score. The data were calculated with analysis of variance; statistical significance was set at an α level of 0.05.

Findings. The results show that there are differences in physical fitness between children regard to academic achievement ($p < 0,05$). The more physically fit students are more successful in learning from the less physically fit peers, which applies to urban and rural children. The results confirm that better physical fitness means better cognitive performance and academic success. Areas of the brain involved in movement and learning are closely related; the movement strengthens these neural networks and causes certain structural changes in the central nervous system. Performing complex motor skills stimulates the prefrontal cortex, which is active in problem solving and improves learning. Movement increases the degree of excitation of the central nervous system, which enhances attention in the class. Under certain conditions, movement stimulated cognitive processes that are crucial for concentration and problem solving. Moving increase blood circulation in the brain, it affect the changes in brain neurotransmitters, and particular the increase of levels of endorphins, which reduces stress, improves mood and causes the effect of calmness after exercise, all of these has positive effects on cognitive performance in academic achievement.

Conclusions. We have found differences in physical fitness of primary school students' regard to their academic achievements. For this reason, it is important to give more emphasis to monitoring the physical fitness of children, and above all to increase the range of professionally guided physical activities in schools.

Key words: motor abilities, school grades, cognitive efficiency

INTERAKCIJA TELESNE PRIPRAVLJENOSTI, UČNIH DOSEŽKOV IN BIVALNEGA OKOLJA OSNOVNOŠOLCEV

Izhodišča. Glavni namen raziskave je bil ugotoviti, ali obstaja interakcija med telesno pripravljenostjo, učnimi dosežki in bivalnim okoljem osnovnošolcev. Spoznanja dosedanjih raziskave so v tem pogledu dokaj neenotna, zato smo se odločili, da naredimo raziskavo v našem okolju. Predpostavljali smo, da bodo imeli boljše telesno pripravljene učenci tudi boljše učne dosežke, kar naj bi veljalo tako za otroke iz mestnega kot podeželskega okolja.

Problem. V zadnjih letih je bilo opravljenih kar nekaj raziskav, v katerih so ugotavljali, kako je gibalna aktivnost povezana z različnimi vidiki kognitivnega delovanja in učnimi dosežki. Bistveno manj pa je raziskav, v katerih so proučevali zvezo med telesno pripravljenostjo in učnimi dosežki. Telesno pripravljenost predstavljajo različne gibalne sposobnosti, ki človeku omogočajo izvajanje gibalne aktivnosti. Raziskave kažejo, da je z vidika izboljšanja in ohranjanja človekovega zdravja bistveno pomembnejše stanje njegove telesne pripravljenosti, kot pa čas, ki ga nameni gibalni aktivnosti. Zaradi teh razlogov smo se odločili, da raziščemo povezavo telesne pripravljenosti in učnih dosežkov. Ob tem bomo proučili tudi razlike v bivalnem okolju.

Metode. Raziskovalni vzorec je obsegal skupaj 307 otrok iz 4. in 5. razreda, ki so obiskovali tri mestne in tri podeželske šole. Stanje telesne pripravljenosti je bilo izmerjeno z uporabo osmih testov SLOfit, na osnovi katerih je bila izračunana skupna vrednost. Podatke o učnem uspehu smo pridobili na osnovi ocen pri matematiki, slovenščini, angleščini, družbi in naravoslovju s tehniko. Na osnovi zbranih ocen smo izračunali skupno povprečno oceno. Podatki so bili obdelani s t-preizkusom in analizo variance, pri čemer je bila statistična pomembnost določena na ravni tveganja $p < 0,05$.

Ugotovitve. Rezultati kažejo, da obstaja pozitivna zveza med telesno pripravljenostjo in učnimi dosežki. Telesno bolj pripravljeni učenci so učno uspešnejši od slabše telesno pripravljenih vrstnikov, kar velja za mestne in podeželske otroke. Rezultati potrjujejo, da boljša telesna pripravljenost pomeni tudi na boljšo kognitivno učinkovitost in posredno učni uspeh. Področja možganov, ki sodelujejo pri gibanju in učenju, so med seboj tesno povezana, gibanje te živčne povezave okrepi in povzroči določene strukturne spremembe osrednjega živčevja. Izvajanje kompleksnih gibalnih spretnosti stimulirata prefrontalni korteks, ki je aktiven pri reševanju problemov, kar izboljša učinkovitost učenja. Gibanje poveča stopnjo vzbujenosti osrednjega živčevja, kar izboljša pozornost pri pouku. V določenih pogojih gibanje spodbudi kognitivne procese, ki so ključnega pomena za koncentracijo in reševanje problemov. Ob tem gibanje pospeši krvni obtok v možganih, vpliva na spremembe možganskih nevrottransmitterjev, predvsem povišanje ravni endorfinov, kar zmanjša stres, izboljša razpoloženje in povzroči učinek umirjenosti po vadbi, vse to pa ima pozitivne učinke na kognitivno delovanje in učno uspešnost.

Zaključek. Ugotovili smo, da je telesna pripravljenost osnovnošolcev pozitivno povezana z njihovimi učnimi dosežki. Tudi zaradi tega bi bilo smiselno dati še več poudarka na spremljanju telesne pripravljenosti otrok, predvsem pa povečati ponudbo in obseg strokovno vodenih gibalnih aktivnosti v šolah.

Ključne besede: gibalne sposobnosti, šolske ocene, kognitivna učinkovitost

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PLAY THEN AND NOW – PARENTS’ PERSPECTIVE

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Numerous research studies signify the importance of play for the general child development. It has been shown that graduates of play-based kindergartens perform much better later in school. The level of aerobic fitness is directly correlated with the volume of particular brain structures (basal ganglia), as well as with cognitive abilities – attention and cognitive control in particular. The issue of how the general trend of physical inactivity and sedentary behaviour influences the overall abilities of children and their cognitive abilities is becoming increasingly important. In order to improve understanding of the subject and to explore the general trend of leisure time spending with children, a survey research of parents of children aged 6 to 8 was conducted. The aim of the study was to compare the playtime of children and its elements with the playtime of their parents at their child’s age. On the sample of 37 parents of children aged 6 to 8, the survey results have shown that a child today spends 110 minutes on average in play at home, while a parent used to spend 96 minutes as a child, which was not statistically significant ($t(1, 66)=0.9, p=.371$). On the other hand, a child today spends 96 minutes on average in outdoor play, while a parent used to spend 157 minutes on average, almost as twice as a child, with an obvious statistically significant difference ($t(1, 66)=3.93, p<.001$). A child today spends 93 minutes in front of a screen on average, which is three times as much as parents used to (on average 30 minutes) which is statistically significant ($t(1, 66)=4.95, p<.001$). In activities that have the elements of rotation (gummitwist, marbles, running, hopscotch), balance (gummitwist, skipping rope, climbing, hopscotch) and dynamic eye accommodation (jumping over obstacles, catching and throwing a ball, etc.), most of the children spend 0-15 minutes, while parents used to spend an hour or more in similar activities. In fine motor skills-based activities (marbles, stickers, plasticine, playing an instrument, etc.), half of the children spend 15 to 30 minutes, while half of

the parents used to spend at least an hour or more. In activities that include walking and running, half of the children spend an hour or more, while 75% of the parents used to spend an hour or more (which at the same time is the activity in which both parents and children spent an equal amount of time). A contemporary lifestyle that includes little movement and physical activity and a lot of screen time may in turn influence many aspects of child development. The paper discusses consequences of such a behaviour and possible preventions of this rising trend.

Key words: motor skills, play, cognitive development, childhood, leisure time

GROWTH AND MATURATION OF SKELETAL MUSCLES DURING CHILDHOOD AND ADOLESCENCE

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Skeletal muscle is the largest organ in the human body, accounting approximately for 20% of body weight in non-obese persons and is essential not only for posture and movement but also for systemic metabolic functions and temperature regulation.

Skeletal muscle development progresses through several stages by which muscle progenitor cells become mature muscle fibers. In humans, this process occurs before birth and at 24 weeks (i.e. 6.5 months) after conception all muscle fibres and fibre types are present. Thus, post-natal muscle growth is based mostly on longitudinal growth to accompany bone elongation and transversal growth (hypertrophy) of existing fibres, with a very minor addition of newly formed muscle fibres (hyperplasia). Satellite cells, specialized stem cells of skeletal muscles, play an important role as myonuclei donors during muscle growth and development.

The post-natal growth of skeletal muscles depends in the first place on a hormonal guidance: thyroid hormones, GH and IGF, insulin and sexual steroids, androgens and estrogens during puberty. Accumulation of newly synthesized proteins is the basic mechanism of growth and needs to be supported by sufficient nutritional amino-acid supply. However, skeletal muscles are relevant not only for protein metabolism, but also for carbohydrate and lipid metabolism. As to carbohydrate metabolism, in children as well as in adults, skeletal muscles are the main site of glucose disposal under insulin stimulation, a process further enhanced by contractile activity. Hence muscle mass and muscle activity are a pre-requisite to control blood glucose levels.

As to lipid metabolism, skeletal muscles not only utilize fatty acids as fuel, particularly during contractile activity at low intensity, but also control via myokines release the balance between accumulation and mobilization

of triglycerides in adipose tissue. There is a reciprocal interaction between muscle fibers and adipocytes: muscle activity stimulates fat mobilization while fat accumulation inhibits muscle growth. This interaction is likely relevant for the link between lack of physical activity and obesity, which is important in children as well as adults.

Three further points deserve attention. Muscle mass and strength are important for bone development as protein and calcium deposition in bones are dependent on mechanical load, generated by muscle contractile activity. Then, there is a relation between muscle development and the immune system: immune cells, macrophages for example, are present in skeletal muscles and immune system responses are affected by chemical signals, interleukines, released by muscles in relation to contractile activity. Finally, the central nervous system is not an independent master controller, which sends motor commands to skeletal muscles, but is also beneficially affected by neurotrophic factors produced and released by skeletal muscles.

TALENT AND HIGH PERFORMANCE ARE TWO DIFFERENT CONCEPTS: How to deal with rising talents in sport?

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Our society is constantly striving to identify individuals who, due to exceptional performance in art, science... or sport, stand out from the crowd.

As in other areas, we look for talented young people in sport and hope they will develop their talent and eventually become elite athletes. Yet stories with a happy ending are quite rare.

Today, we know a young person's talent changes throughout their development and can sometimes even be lost. Therefore, a child's talent which is genetically conditioned is not a reliable parameter of their high performance in adulthood. It represents a solid foundation (a potential) but, as such, it is only a very small part of an exceptionally high performance. If one does not have the 'realisation talent', as Francis Galton named the exceptional will, zeal and power of working in favourable external conditions, it is not possible to expect a top achievement, even in the case of an outstanding talent.

The empirical science and practice clearly show how unreasonable it is to have children take up specialised programmes only because of their genetic dispositions, and recommend setting up long-term development models that facilitate appropriate development of young sports talents.

The key elements of a successful development model include:

Long-term phase development models. Early specialisation is not an alternative! Early specialisation has to be reconsidered and looked at from a different perspective. Today, there is no dilemma between narrowly focussed programmes with a (too) early specialisation or long-term development. The information that 90% of elite athletes were not among the winners when they were aged 11–12 gives everyone a clear idea of which model

is better. Nowadays athletes are in full bloom later than they used to be in the second half of the 20th century and their sports career is considerably longer.

A clear doctrine on competitive youth sport is needed. We need a different youth sports policy! The public authorities in charge of sport and the sporting professional circles must devise a long-term vision of development of young talents in sport. It is very important that the findings about the scientifically proven benefits of a long-term divergent development of young talents are consolidated and accepted by the general public as well (including school and the media). Sport categorisation of children and financing of sports clubs based on performance of 8-, 10-, 12- or 14-year-old children must be abolished, and the competitive systems with children's categories amended.

Well-structured environment for development of sports talents. The environment that is suitable for developing sports talents requires not only well-structured organisational and material conditions for schooling, training and competitions, but also highly-qualified staff. The latter includes managers as well as coaches who directly provide education to young people and help them cultivate their talents in different phases of their development. Therefore, coaches, members of club management and national sports associations as well as parents and young athletes should all receive education on an ongoing basis. Of course, appropriate programmes also play an important role by complementing the required sports content and ensuring the achievement of the basic educational goals (development of basic life and mental skills, development of internal motivation, inner satisfaction etc.), as without these top results cannot be expected.

Permanent and systematic health supervision of young athletes A system should be set up to ensure that young athletes are under constant health supervision by well-qualified paediatricians.

TALENT IN USPEŠNOST STA DVA RAZLIČNA POJMA; Kako ravnati s talenti v športu?

Naša civilizacija vseskozi strmi k prepoznavanju posameznikov, ki s svojo izjemno uspešnostjo v umetnosti, znanosti,... ali športu močno odstopajo od običajnih ljudi.

Tako kot na drugih področjih tudi v športu iščemo nadarjene mlade ljudi in upamo, da bodo svoj talent razvili ter kasneje postali vrhunski športniki. A zgodbe s srečnim koncem so zelo redke.

Denes vemo, da se mladostni talent skozi razvoj spreminja in se včasih lahko tudi izgubi. Zato otroška – genetsko pogojena talentiranost ni zanesljiv parameter uspešnosti v odraslosti. Predstavlja pomemben temelj (potencial) a je sam po sebi za izjemno uspešnost veliko premalo. Brez „realizatorskega talenta“ kot Francis Galton imenuje izjemno voljo, gorečnost in delavnost ter ugodnih zunanjih pogojev ni mogoče še ob tako razkošnem talentu pričakovati vrhunskega dosežka.

Empirična znanost in praksa jasno kažeta, da ni smiselno na osnovi zgolj genetskih dispozicij vključevati otroke v specializirane programe, temveč postaviti dolgoročne modele razvoja, v katerih se bodo mladi športni talenti lahko ustrezno razvijali.

Najpomembnejši elementi uspešnega razvojnega modela so:

Dolgoročni fazni razvojni modeli/ Zgodnja specializacija ni alternativa! Potreben je odmik in preseganje razmišljanja o zgodnji specializaciji. Danes ni več dileme ali ozko usmerjeni programi s (pre)zgodnjo specializacijo ali dolgoročni razvoj. Podatek, da 90% vrhunskih športnikov ni bilo med zmagovalci pri 11 – 12 letih mora vsakomur dajati povsem jasne opredelitve kateri model je ustrežnejši. Danes športniki dosegajo svoj športni razcvet kasneje kot bilo to v drugi polovici 20. stoletja, njihova športna kariera pa traja bistveno dlje.

Potrebna je jasna doktrina tekmovalnega športa mladih/rabimo drugačno politiko športa mladih! Organi oblasti zadolženi za področje športa in športna stroka morajo oblikovati dolgoročno vizijo razvoja mladih športnih talentov. Zato je zelo pomembno, da se spoznanja o znanstveno potrjenih prednostih dolgoročnega divergentnega razvoja mladih talentov

utrdijo in ponotranijo v družbi nasploh. Odpraviti je treba športno kategorizacijo otrok, financiranje športnih klubov glede na uspešnost 8, 10, 12 ali 14 letnikov, spremeniti tekmovalne sisteme otroških kategorij itd..

Urejeno okolje za razvoj športnih talentov. Okolje za razvoj športnih talentov ne zahteva le zelo urejenih organizacijskih in materialnih pogojev za šolanje, vadbo in tekmovanja, temveč še posebej usposobljene kadre. Tako tiste za vodenje kot trenerje za neposredno pedagoško delo, ki bodo znali mladim na različnih ravneh njihovega razvoja pomagati razvijati njihov talent. Zato je potrebno stalno izobraževanje trenerjev, članov klubskih uprav, nacionalnih športnih zvez ter staršev in mladih športnikov. Seveda so pomembni tudi ustrezni programi, ki bodo ob potrebnih športnih vsebinah poudarjali in skrbeli za razvoj temeljnih vzgojnih nalog (razvoj osnovnih življenjskih in mentalnih veščin, razvoj notranje motivacije, notranjega zadovoljstva itd., saj brez opravljenih teh nalog ne more priti do vrhunškega rezultata.

Permanenten in sistematičen zdravstveni nadzor nad mladimi športniki. Vzpostaviti je treba sistem, kjer bodo mladi športniki podvrženi stalnemu zdravstvenemu nadzoru usposobljenih pediatrov.

IMPACT OF PHYSICAL ACTIVITY ON GROWTH AND DEVELOPMENT IN CHILDREN

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Properties and development of human movement are phylogenetically determined. Child growth and development happen simultaneously, depending on genetic factors, sex, race, diet, social and emotional conditions and presence of chronic diseases and physical activity.

Impact of physical activity on growth: Physical activity promotes secretion of growth factors which encourage faster growth of bones and muscles. Physical inactivity results in reduced muscle and bone mass. Reduced muscle mass causes low muscle strength and poor coordination, balance, mobility and stamina, which leads to increased number of injuries. Physical inactivity also causes increased body mass through accumulation of body fat and development of chronic metabolic diseases. **Impact of physical activity on development:** Motoric, physical, cognitive, emotional and social development in children occurs in an integrated and harmonised manner. A change in one of these areas influences the other ones. Experiences and environment (learning) have the strongest influence on development. A child receives stimuli through senses (light, sound, touch), to which it responds with senso-motoric reactions. Development of children under the age of 8 proceeds through constant improvement of perception and motor skills. A child perceives its body through motion; it tests its limits and experiences joy and pride towards its growing ability and dexterity, thus building self-confidence. Excretion of “happiness” neuro transmitters during motoric activities is the cornerstone of well-being. The body is the starting point for assessment of the position and direction and relationship with other people, for development of the sense of rhythm and the perception of space and time. A child becomes aware of other children and adults through motoric activities; it shares a common space with them, participates in group efforts

to attain goals, learns the meaning of rules, respects and takes into account diversity, develops creativity and problem solving skills. Physically handicapped children are thus at high risk for later development of perception and cognition, socialisation and emotional disorders. During childhood and adolescence, executive function (EF) abilities, or cognitional processes necessary for attaining goals, like organisation and purposeful controlled behaviour, also develop. EF consists of three components: inhibition, updating of working memory and ability of shifting. Motoric ability is irreplaceable in their development. Constant changes in environment during early childhood influences development of cognitive flexibility and concentration on what's important while ignoring the unimportant stimuli. Inactivity during early childhood could thus be grounds for development of concentration disorders. The cornerstone of an efficient EF is ability of inhibiting the need to move while attention is activated. Disorders in this interaction are basis for attention deficit and hyperactivity disorders (ADHD). Aerobic activity (especially in groups) influence neurochemical and morphologic development of brain structures responsible for memory and learning. Therefore, (group) aerobic physical activity has a positive influence on the learning disabilities.

Keywords: movement, linear growth, executive function

VPLIV GIBANJA NA RAST IN RAZVOJ OTROK

Način in razvoj človekovega gibanja je določen filogenetsko, oziroma je zapisan v genomu človeka kot vrste. Rast in razvoj otroka potekata istočasno in sta odvisna od genetskih faktorjev, spola, rase, prehrane, socialnih in čustvenih razmer, prisotnosti kroničnih boleznih in telesne aktivnosti.

Vpliv gibanja na rast: Telesna aktivnost je spodbujevalnik sekrecije faktorjev rasti, ki spodbujajo hitrejšo rast kosti in mišic. Neaktivnost ima za posledico zmanjšano maso mišic in kosti. Zmanjšana mišična masa je vzrok zmanjšane mišične moči, slabše koordinacije, težav v vzdrževanju ravnotežja, zmanjšane gibljivosti in vzdržljivosti, te pa pripeljejo do povečanega števila poškodb. Telesna nedejavnost je vzrok tudi naraščanja telesne teže na račun kopičenja maščevja in posledično razvoja kroničnih presnovnih boleznih.

Vpliv gibanja na razvoj: Razvoj otroka poteka celostno in usklajeno na gibalnem, telesnem, kognitivnem, čustvenem in socialnem področju. Sprememba na enem področju vpliva na ostala področja. Najmočnejši vpliv na razvoj imajo izkušnje, oz. okolje (učenje). Otrok dobiva spodbude skozi čutila (svetloba, zvok, dotik), odziv na njih je gibalni (senzomotorične reakcije). Pri otrocih do osmega leta starosti razvoj poteka skozi nenehno izboljšanje percepcije in motorike. Z gibanjem otrok zaznava svoje telo, preizkuša, kaj le-to zmore, doživlja veselje in ponos ob razvijajočih se sposobnostih in spretnostih ter gradi zaupanje vase. Med motoričnimi aktivnostmi se sproščajo hormoni ugodja, kar je temelj dobrega počutja. V gibalnih dejavnostih je telo izhodiščna točka za: presojo položaja, smeri in razmerja do drugih, razvijanje občutka za ritem in hitrost ter dojetje prostora in časa. Med gibalnimi aktivnostmi se otrok zaveda drugih otrok in odraslih, z njimi deli prostor, se skupinsko prizadeva za doseganje ciljev, spoznava pomen upoštevanja pravil, spoštuje in upošteva različnosti, razvija ustvarjalnost in sposobnost razreševanja problemov. Pri gibalno oviranem otroku je zato prisoten visoki rizik za kasnejši razvoj percepcijskih in kognitivnih, socializacijskih in čustvenih motenj. Tekom otroštva in adolescence dozoreva tudi sposobnost eksekutivne funkcije (EF), oz. kognitivnih procesov potrebnih za doseganje zastavljenih ciljev kot so: organiziranje in ciljno kontrolirano obnašanje. EF je sestavljena iz treh komponent: inhibicije, posodabljanja delovnega spomina in sposobnosti preskokov pri razmišljanju. Za razvoj le-teh je nepogrešljiva sposobnost gibanja. Nenehno spreminjanje okolja v zgodnjem otroštvu vpliva na razvoj kognitivne fleksibilnosti in osredotočenosti na pomembne ob ignoriranju nepomembnih dražljajev. Neaktivnost v zgodnjem otroštvu bi, torej, lahko bila podlaga za razvoj motenj koncentracije. Temelj za učinkovito EF je sposobnost inhibiranja potrebe po gibanju med aktivacijo pozornosti. Motnje v tej interakciji so podlaga motenj pozornosti in aktivnosti (ADHD). Aerobne aktivnosti (posebej skupinske) vplivajo na neurokemični in morfološki razvoj možganskih struktur zadolženih za spomin in učenje. Aerobna telesna (skupinska) aktivnost, torej, blagodejno vpliva tudi na učne težave.

Ključne besede: telesna dejavnost, longitudinalna rast, eksekutivna funkcija

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PLANTAR PRESSURE SORENESS FORMATION DURING ADVANCED PHASES OF PREGNANCY AND THE EFFECT OF SPECIAL FOOTWEAR

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Objectives. The aim of this study was to analyze the effect of advancing pregnancy on the plantar pressure soreness occurrence as it is an indicator of increased plantar pressures which may develop into subsequent foot problems and pain, and to assess the effect of special footwear on plantar pressure soreness distribution.

Methods. 67 healthy pregnant women participated at all data collection session at their 27, 32 and 37 gestational weeks. At each data collection session, the plantar pressure soreness distribution was assessed for both feet by recording the contour of the foot into the paper record by the examining physician. During the first data collection session participants were randomly divided into a control (n=37) and experimental group (n=30). Experimental group obtained the special footwear.

Results. For the control group, the results show higher occurrence in pressure soreness in the medial edge of thumb and first metatarsal-phalangeal joint. For the experimental group, the increase occurred at the area of the edge of the heel for the left foot and in the medial edge of thumb for the right foot. The distribution of pressure soreness areas of the control and experimental group is in accordance with our hypothesis that the special footwear redistributes the plantar pressures. During pregnancy, increased loading on the forefoot was observed. The special footwear introduction in the experimental group increased the pressure soreness occurrence at the edge of the heel, probably associated with the plantar pressure redistribution more to the heel area.

Conclusions. Generally, it can be said that for both feet within experimental and control group there has been an increase in plantar pressure

soreness in all areas in comparison with the first measurement. Changes between the special footwear users and non-users were revealed, but trend of these changes is rather unclear as there are many factors influencing the foot condition during advanced stages of pregnancy.

Key words: Pressure soreness, Pregnancy, Special Footwear, Foot

ZNANSTVENI PRISPEVKI /
SCIENTIFIC PAPERS

IMPACT OF GENDER ON COMPLEX DEVELOPMENT DYNAMICS AMONG PRESCHOOL CHILDREN

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Introduction. Preschool years are a critical period in terms of developing fundamental movement skills (FMS), which play a crucial role in children's motor development and health. Some of FMS, even in young children, are used as motor abilities test. However, contrary to the adults, for pre-school children it is not appropriate to analyze individual motor abilities because their motor abilities are mostly manifestations of single latent dimension (general motor latent dimension). Therefore, while affecting one's ability, other abilities are developed in parallel. Due to existence of individual growth and developmental differences, age and gender have positive influence on performance and achievements in FMS in pre-school children.

Methods. On a sample of 30 children (15 boys and 15 girls, mean age 3.05 ± 0.82 years; min=2.19; max=4.39 years) we analyzed the impact of body weight (BW) and body height (BH) on the results of two selected tests: *long jump* (LJ) and *20 meters running* (20M). Normality of distributions was examined by using Kolmogorov Smirnov test. Reliability of measurements was tested by Pearson coefficient of correlation and by ANOVA. Distribution parameters were analyzed for all measured variables. T-test for independent samples was used to identify gender differences while correlation analysis (on whole sample, and separately for gender samples) was used to determine association between morphological and motor variables.

Results. For measured tests *long jump* and *20 meters running*, high reliability of data was determined. Distribution characteristics for variables BW (Skew=1.05, Kurt=2.82, KS- $p > 0.20$) and for the 20M test (Skew=2.57, Kurt=8.35, KS- $p > 0.20$) had small deviations, but within the limits of statistical tolerance. T-test for independent samples determined that boys were significantly heavier than girls ($BW_{\text{GIRLS}} = 14.30$ kg, $BW_{\text{BOYS}} = 15.67$ kg, $p = 0.04$), while significant differences between boys and girls were not determined in

BH, LJ, and 20M. On the whole sample, significant correlation between BH and LJ ($r=0.55$), BH and 20M ($r=-0.63$), BW and 20M ($r=-0.54$) was determined. A significant correlation was determined between BW and 20M ($r=-0.72$) in the sample of girls, and between BH and LJ ($r=0.61$), BH and 20M ($r=-0.89$) in the sample of boys.

Conclusions. From the youngest age there are significant gender differences in BW and probably in the influence of some morphological variables on better results in basic motor abilities tests. Because higher BH and BW are indirectly attributed to older children, the following main conclusion can be pointed out: due to existence of nonlinear and complex dynamic of changes within bio-motor status at early age, it is important to maximally homogenize groups with the aim of obtaining precise information about the structure of relations within certain bio-motor dimensions of the youngest children.

Key words: morphological variables, motor abilities, gender differences, correlation analysis

PREDICTIVE STATUS OF TODDLERS BODY MASS INDEX

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Introduction. Toddler generally implies for 12 to 36 months old child; time from which children can be included in the preschool educational institution. The issues of harmonious growth and development of children and their relations with the eating habits and the amount of physical activity of children, but also of their parents, which are changed under the influence of modern lifestyles, are subjects to numerous research. The general conclusions of most studies are: 1) there is a constant increase in body weight and in the amount of subcutaneous fatty tissue in children, primarily caused by the sedentary lifestyle and by the consumption of high calorie foods in inappropriate quantities; 2) there is a correlation between the lifestyle of parents, their habits, diet, and obesity with the habits and obesity of children; correlation becomes even more prominent after seven years of age. In order to describe the trend of growth and development of healthy children, the World Health Organization (WHO; 2006) conducted research and published a report about standards for child growth as well as standards of relationships: length/height-for-age, weight-for-age, weight-for length, weight-for-height, and BMI-for-age. The aim of this study was to establish and to compare the basic morphological parameters of Croatian toddler children with median values of age equivalent sample from WHO statistics. Also, to analyze the relationship between the child and parent BMI.

Methods. On a sample of 30 children (15 boys and 15 girls of mean age 3.05 ± 0.82 years; min=2.19 years; max=4.39 years) the body height (BH) and body weight (BW) were measured, and body mass index (BMI) was calculated. Parents body height and body weight data were collected through the questionnaire. Mann-Whitney U was used to identify the significance of differences between boys and girls in BH, BW, and BMI, while T-test for single means was used to compare the obtained results with the normative data obtained by WHO (2006). Multiple regression analysis was used to analyze

relations between BMI of both parents (as predictors) and children BMI (as criteria).

Results. Mann-Whitney U test determined how boys were significantly heavier from girls ($p = 0.04$). T-test for single means, for both subsamples revealed significant differences between BH and criterion WHOBH values: 1) $BH_{GIRLS} = 98.29$ cm, $WHOBH_{GIRLS} = 95.38$ cm, $p = 0.03$; $BH_{BOYS} = 100.73$ cm, $WHOBH_{BOYS} = 97.02$ cm, $p = 0.02$. Significant differences haven't been determined for BW ($BW_{GIRLS} = 14.30$ kg, $WHOBW_{GIRLS} = 13.95$ kg, $p = 0.29$; $BW_{BOYS} = 15.67$ kg, $WHOBW_{BOYS} = 14.59$ kg, $p = 0.06$) and BMI ($BMI_{GIRLS} = 14.82$ kg/m², $WHOBMI_{GIRLS} = 15.40$ kg/m², $p = 0.08$; $BMI_{BOYS} = 15.43$ kg/m², $WHOBMI_{BOYS} = 15.55$ kg/m², $p = 0.74$).

For parents values of BH, BW, and BMI no significant deviations from the normal distribution were found. The relationship between both parents BMI and children BMI was analyzed and the following results were determined:

1) for girls: $R_{BMI\ BOTH\ PARENTS/BMI\ GIRLS} = 0.35$; $R^2 = 0.13$; $p < 0.05$;

2) for boys: $R_{BMI\ BOTH\ PARENTS/BMI\ BOYS} = 0.33$; $R^2 = 0.11$; $p < 0.05$.

Conclusions. It is concluded that regardless of the similar dynamics of growth and development of children around the world, since the earliest age there are gender distinct differences in BH, BW, and BMI. Further, toddler age is likely to be too low to be predicted by the BMI of the parents.

Key words: toddler, parents, BMI, Mann-Whitney U test, regression analysis

EDUCATIONAL ROLE OF EXCURSION AND RECREATIONAL TOURISM WITH CHILDREN IN SERBIA

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Excursion and recreational tourism as forms of traveling represent one of the specific forms of tourist movement, and as such can be observed from the aspect of their huge share in the tourist turnover on the tourist market. In this paper, special emphasis will be put on the education of children in movement. Issues appearing in the organization and realization of certain activities in connection with the theme excursions will be taken into consideration, which are organized for children in protected areas. Children could thus get connected with nature, with protected natural resources, and would cherish positive relations towards the values of protected natural resources. In that way, the education of children about the values of protected natural resources is being done, which represents a chance of raising the level of ecological awareness of future generations.

Keywords: children, education, Serbia, tourism, sport

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RELATIONS BETWEEN SPECIFIC AGILITY AND CONTRACTILE CHARACTERISTICS OF DIFFERENT MUSCLE GROUPS IN U15 FEMALE VOLLEYBALL PLAYERS

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Introduction. The preparation of young athletes in sports games, in its basis, implies two different types of training: general preparation training, where physical skills are developed, and specific training, where technical and tactical performances of athletes are being improved. One of the tasks of sports science is to determine all the quantitative characteristics of the connection between these two segments of preparation, in order to get a more efficient transfer of applied training methods to the athlete's competitive performance. The aim of this paper is to determine the relation between the specific agility and the contractile characteristics of the different muscle groups in U15 female volleyball players.

Methods. The sample of subjects consisted of 53 girls, 13.3 ± 1.1 years old, that competed in their national U15 category (Serbia, Croatia, Bosnia and Herzegovina). The basic descriptive characteristics of the subjects were: BH = 168.8 ± 6.9 cm; BM = 58.4 ± 10.2 kg; BMI = 20.39 ± 2.79 kg • m⁻²; Training experience = 4.1 ± 1.7 yrs. Specific agility was assessed using the modified X test, while the contractile characteristics were measured using the tensiometric dynamometry method on the three muscle groups: back-waist extensor muscles, test "Isometric Dead Lift", plantar flexors of the ankle joint, the test "Isometric Seated Ankle Blateral Extension", and finger flexor muscles of both left and right hand "Isometric Hand Grip". Measured contractile properties were: maximum muscular force - F_{max} , maximum muscular explosiveness - RFD_{max} , and general muscular explosiveness - $RFDF_{max}$. All of the variables, used to measure the contractile characteristics of the tested muscle groups, were standardized applying multidimensional scaling

method by which scores are calculated relative to the examined contractile characteristic ($SCORE_{F_{max}}$ and $SCORE_{RFD_{max}}$ $SCORE_{RFDF_{max}}$). Given scores represented a system of predictive variables, while the criterion variable was specific agility ($X_{agility_test}$). Descriptive, correlation and regression analysis were used in statistical data processing.

Results. The results showed that there are two statistically significant correlations: between the level of specific agility and the peak of the maximum force and the basic level of explosiveness, i.e. F_{max} and $RFDF_{max}$ at the level of $r = -0.349$, $p = 0.011$ and $r = -0.297$, $p = 0.031$, respectively. Statistically significant prediction model was defined with the use of multiple specification equations, as follows, specific agility (ANOVA of regression, $F = 3.346$, $p = 0.026$), compared to the contractile characteristics at the level of explained variance of $R^2 = 0.17$, with a standard error of 0.662 s, which has the following form: $X_{agility_test} = 10.49245 - (SCORE_{F_{max}} \cdot 0.02779) + (SCORE_{RFD_{max}} \cdot 0.02112) - (SCORE_{RFDF_{max}} \cdot 0.01011)$.

Conclusion. On the basis of the obtained results it can be concluded that the manifestation of motor activity in terms of specific agility in the volleyball U15 age at the partial level statistically significantly depends on the level of general development of the maximum muscular force and the level of general development of the explosive muscular force.

Key words: volleyball, force, agility

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BASIC CHARACTERISTICS OF BODY AND CONTRACTILE STATUS OF BOYS AGED 13 AND 14 YEARS IN FUNCTION OF SELECTION IN SPORT SYSTEM OF R SERBIA

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Introduction. Athletes are mostly young adult people who have the abilities necessary for participating in physical training, and who have competed in sports as a varsity player for reason to reach their potential of excellence in sports performance. In general, the system of sports training represents a complex multistage process wherein the training load is based on two biological phenomena: homeostasis and adaptation. In that complex system, the selection process is the base for identification of individuals who possess the potential for achieving top results. The aim of this study is to determine the characteristics of sports selection at children aged 13 to 14 years as an initial age of the sports selection system in R Serbia, considering basic morphological and muscle contractile potential indicators.

Methods. The sample consisted of 238 boys, age 13.6 ± 0.6 years, divided in two groups: group engaged in system of sports competition of Serbia (football, basketball, waterpolo, volleyball, handball, swimming, karate, judo, taekwondo, kayak and rowing) for at least 2 years ($N=165$); control group ($N=73$). All subjects were pupils of 7th and 8th grade of elementary school from 3 regions in R Serbia (Belgrade, Kikinda and Jagodina). Morphological characteristics were estimated using by 3 variables: Body Height (BH), Body Mass (BM) and Body Mass Index (BMI). Contractile potential was estimated using by 4 variables: maximal and explosive isometric force as a sum of left and right hand grip ($F_{\max\text{-SUM}}$ and $RFD_{\max\text{-SUM}}$), and relative value of maximal and explosive isometric force as a sum of left and right hand grip ($F_{\text{rel-}SUM}$ and $RFD_{\text{rel-}SUM}$).

Results. Results of the morphological characteristics have shown that the boys who are engaged in sports have statistically significant higher BH and BM than controls (BH=172.04±9.60 vs 167.07±7.40 cm, $p<0.001$ and BM=63.19±14.35 vs 56.82±12.42 kg, $p<0.001$), while there is no difference in BMI (BMI=21.17±3.66 vs 20.21±3.45 kg•m⁻², $p=0.059$). Regarding contractile characteristics, it has been determined that statistically significant difference exists, but only for maximal isometric force variable ($F_{\max_SUM}=621.97\pm200.50$ vs 540.93 ± 135.53 N, $F=9.910$, $p<0.002$). The statistically significant differences is not found for RFD_{\max_SUM} as well as all relative values variables ($RFD_{\max_SUM}=3564.32\pm1276.84$ vs 3404.18 ± 934.53 N, $p=0.337$; $F_{rel_SUM}=9.89\pm2.36$ vs 9.73 ± 2.42 N/kg, $p=0.630$; and $RFD_{rel_SUM}=57.41\pm18.95$ vs 61.37 ± 17.40 N, $p=0.129$).

Conclusions. Based on these results it can be concluded that selected boys in sport system of R Serbia have greater body height and body mass, same BMI and greater maximal force indicators compared to controls. It was found that absolute values of explosive force level, and relative force and explosive muscle contractile characteristics do not differ between boys from sport and controls. Generally, on the bases of the results of this study, it can be concluded that higher body height, body mass and absolute muscle force values at boys are recognized as advantages in the initial sports selection system in the R Serbia.

Key words: morphology, muscle force, rate of force development, selection in sport, boys.

IMPACT OF EXTRA CURRICULAR PHYSICAL ACTIVITY ON BODY CHARACTERISTICS, MOTOR ABILITIES AND PHYSICAL ACTIVITY HABITS IN 7-9 YEAR OLD CHILDREN

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Introduction. Sedentary lifestyle is the problem of modern lifestyle. There is less spontaneous physical activity and more passive free time activities. This leads to negative consequences, e.g. body weight gain and obesity, which are two of the most important factors of many modern diseases. Unfortunately, these trends have already been found in children, therefore it is essential how much attention is paid to encourage children to get active and providing an encouraging environment and circumstances that enable active leisure activities. An important purpose of a conscious society, mostly parents and teachers, is to provide children with adequate everyday physical activities and limit negative effects of modern lifestyle. Despite the declarative awareness of the importance and role of healthy lifestyle, there is still a lack of additional sports activities, and the trend of medical conditions is still increasing. This indicates that the interventions are either not intensive enough or offered to children in an unsuitable way which the children do not accept. One of the options that schools can provide are extra-curricular sports activities during after-school extended time. These activities are intended to enrich regular PE lessons, to present different sports activities to children and get them used to active leisure time. Our starting research question was: Have chosen additional interventions have an effect on physical characteristics and development of motor abilities of children and to what extent?

Methods. In our research we investigated the influence of extracurricular sports activities. To do this, we organized a one-year longitudinal research, during which one group experienced sports intervention. The experimental group was given additional three hours of physical activities weekly and the

control group was not. We performed testing of body physical characteristics, motor abilities and physical activity habits at the beginning and end of the experimental period. In experimental group participate 23 children and in control group 18 children. In experimental group was 14 girls and 9 boys. In control group was 11 boys and 7 girls.

Results. The intervention increased the total amount of physical activity in experimental group, increase of total daily physical activity (16%), increase in time of moderate (33%) and vigorous intensive physical activity (88%) and decrease of physical inactivity (3%), yielding 46% increase in moderate to vigorous physical activity. There were no changes in body characteristics and in most of motor abilities, except for 6.4% lower flexibility loss in an experimental group.

Conclusions. We can conclude that the chosen intervention can change physical activity habits, but the period of time was probably too short to show effects on body characteristics and motor abilities.

Key words: sports, accelerometer, lifestyle

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PHYSICAL ACTIVITY AND SPORT ENGAGEMENT IN ELEMENTARY SCHOOL STUDENTS

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Introduction. Schools can play a crucial role to prevent obesity, high blood cholesterol, high blood pressure and depression among youth by promoting physical activity which is associated with numerous health benefits. By observing the latest literature there are evidence-based studies related to health related problems that indicate that even modest amounts of physical activity can have health benefits in high-risk children. Also, there is a growing body of research that is focused on the association between school-based physical activity and sport with academic performance among school-aged youth, where researchers suggest that physical activity may have an impact on cognitive, emotional, and learning mechanisms. Data about the engagement of children and youth in Physical activity and sport for the metropolitan area of the City of Split is missing, and authors suggest that comparable surveys can contribute in providing the information that supports the developing of strategy for addressing high-risk health factors. Therefore, the main aim of this research was to assess engagement in physical activity and sport in middle-school students of the metropolitan area of the City of Split.

Methods. Data for this research were collected from 914 (age range 13-14 yrs) elementary school students from 16 schools in the metropolitan area of the City of Split. There was almost equal participation from each gender (478 male – 52.3%; 436 female – 47.7%). The Ethical Committee of the Faculty of Kinesiology, University of Split, Croatia verified that this investigation complied with all ethical standards for scientific investigations involving human participants. For the assessment of physical activity and sport among subjects, Eurobarometer survey was used. Only first two question of this survey were analyzed (1. *How often do you exercise or play sport?*; 2. *How often do you engage in other physical activity such as cycling from one*

place to another, dancing, gardening, etc.?). All results were expressed as a percentage.

Results. According to results obtained, almost every subject (94%; n=869) is engaged in physical activity or sport, where 90% of them exercise or play sport at least 3 times per week. Only 3% of all surveyed subjects said that they never engage in physical activity or sport. However, results indicate that 53% (n=244) of male and 75% (n=325) of female students don't exercise 5 times a week what is in accordance with WHO recommendations. When subjects were asked about their other physical activity (such as cycling, dancing, gardening etc.), 67% of them have this or any other kind of activity at least 1 or 2 times per week, 12% of them have it even 5 times per week.

Conclusion. It can be concluded that elementary school students from Croatian exercise below WHO recommendations (at least 5 times for 1 hour of physical activity per week are minimal standards for children), However, it is satisfactory that most of them are engaged in physical activity and sport to some extent, although it should be more frequent. Overall, when observing gender differences, male students exercise or engage in some kind of activity more than their female counterparts. With regard to the quality of the data collected, more longitudinal research about engages in physical activity and sport is required. These children should be surveyed more intensively, and schools should promote healthy life style by informing students about all health related factors associated with lack of physical fitness.

Key words: survey, public health, Eurobarometer

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METRIC CHARACTERISTICS OF SOME JUMP TESTS ON SAND SURFACE

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Introduction. In many sports games, such as handball, soccer or volleyball, jumping is very important for competitive success. The variations of these games which are played on the sand court are gaining popularity, and beach volleyball is, for now, the only one played within the official Olympics programme. The soft and unlevelled sand represents a specific surface which does not allow the measurement of jumping performance by some validated instruments such as force plate or jump mats. Thus, accelerometers might be the solution here due to small dimensions and their mode of operation. In previous research, the myotest accelerometer was highly reliable for estimating jump height within and across testing sessions. However, studies that have assessed its concurrent validity by comparing it with the gold standard (force plate) and optojump device call for caution when interpreting data obtained from different devices. Moreover, metric characteristics of this commercially available device are still relatively untested in terms of measuring jumping performance on sand surface, especially on young athletes. The myotest device therefore requires further validation before being used as a monitoring tool for assessing jumping performance on sand surface.

Methods. On a sample of 20 youth female volleyball players (14.25 ± 0.96 years), metric characteristics of 2 tests of jumping performance were measured by the myotest accelerometer on sand surface: countermovement jump (CMJ) and plyometric jump (PMJ). When performing the CMJ test, the participants performed 5 maximum effort standing jumps with a brief rest between the jumps, whereas in the PMJ test, they performed 5 consecutive jumps for maximum height with no rest between each repetition. Both tests were repeated 3 times with a pause sufficient for recovery. Reliability of the tests was analysed based on the intercorrelation matrix of the test items. Inter-item correlation and Cronbach's alpha coefficient were also calculated.

Homogeneity of the tests was assessed with 1-way repeated measures analysis of variance [ANOVA]. Sensitivity was analysed by the Kolmogorov-Smirnov test for determining distribution normality, and by measures of distribution skewness and kurtosis (SKEW and KURT).

Results. High level of reliability was determined for both tests assessing jump height on sand surface. All values of item intercorrelation in both tests exceeded the value of 0.9. Values of the CA and IIR coefficients for the CMJ test were 0.978 and 0.948 respectively, whereas in the PMJ test the values were 0.974 and 0.932. No systematic error was discovered with 1-way repeated measures analysis of variance (CMJ F test=1.098, $p=0.344$; PMJ F test=2.069, $p=0.140$), which confirms good homogeneity of the applied tests. Values of the KS-test (0.08 for both CMJ and PMJ, with the cut-off value of 0.30) and the measures of asymmetry and peakedness of distribution (CMJ SKEW=0.187, CMJ KURT=-0.451; PMJ SKEW= 0.074, PMJ KURT=-0.494) confirm good sensitivity of both tests.

Conclusions. The myotest accelerometer proved to be a reliable, homogenous and sensitive device for measuring jump height of youth female volleyball players. Thus, it can be used to control the jumping ability in the training process. However, due to weak concurrent validity obtained in some previous studies, it is not recommended to compare the results obtained by the myotest accelerometer with the results obtained by other devices for assessing jumping performance (force plate, optojump, etc.).

Key words: *beach volleyball, youth female players, myotest accelerometer, validation*

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METRIC CHARACTERISTICS OF TESTS INTENDED FOR THE EVALUATION OF FLEXIBILITY OF PRESCHOOL CHILDREN

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Motor abilities depend not only on genetic material but on environmental factors also since small children grow and act in different surroundings. When referring to reaching optimal motor development, the child has to be surrounded by stimulative and rich environment which will give the child variety of experiences. The aim of this paper was to test metric characteristics of tools intended for the evaluation of flexibility of preschool children.

The sample of participants are 33 kindergarten children aged 4 to 6 years (17 girls and 16 boys). Measured variables are four tests for testing flexibility (*shoulder flex*, *bridge*, *floor touch* and modified sit & reach - *V-sit and reach*). All tests was performed three times, and all measures was written. All kindergarten children know to perform all the tests.

Results of homogeneity show best results in *floor touch* and *V-sit and reach* test. Reliability was significantly high in all applied tests (Cronbach alpha over 0.90) except in *bridge* test (Cronbach alpha 0.89). Sensitivity results showed that three of the applied tests were a bit difficult for this age of children (*bridge*, *shoulder flex* and *V-sit and reach*), while *floor touch* test showed to be too easy.

Very small number of research on flexibility was conducted on preschool children. The reason is probably because there are many difficulties in measuring such small children. All applied tests should be used in future research except for *bridge* test. Preschool children should be included in as many sport activities as possible to develop a span of motor abilities, not just a single one.

Key words: motor abilities, motor development, reliability, homogeneity, sensitivity

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INTEGRATING FAIRY TALE WITH MOVEMENT EXPRESSION THROUGH THE USE OF LANGUAGE AND MUSIC

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Introduction. A modern approach to learning and teaching in preschool period as well as in elementary and further education is directed towards integrating sectors or subjects within the process. Cross-sectoral or cross-curricular integration, which is still in the initial phase of implementing and establishing the successful methods and forms of work in Slovenia, has proved to be an important piece of motivation for both for children and educators/teachers. Children learn and experience the world in various ways. Through movement, they perceive and discover their body, they test the limits of their bodies, they experience joy and pride when developing abilities and skills, and they build self-confidence. The experience and perception of the world are based on information derived from their body, the perception of environment, the experiences gained through motor activities, and creativity in different situations. The development of a child, which would otherwise be defined only in the physical/sports field, is therefore equally reflected in all other fields of development, further demonstrates the integrity of the child's development.

One of the aims of literary education is to promote the child's creative and subjective acceptance of the text. What is of the utmost importance is an independent construction of the world of text. It is important for a child to have an aesthetic experience in different fields of expression and, after analysing the meaning of the text, the child should respond to the text by independently using his or her strongest type of expression, be it musical, oral or motor.

Music, movement and speech are primarily connected. This is reflected in various musical activities that we perform in the learning process. With the

development of musical abilities and skills, the children express themselves with movement while listening to music. Movement as an activity is included in different fields of musical education: performing, listening and creating music, as well as in musical didactic games and in composing a fairy tale with music. All this is supported by the methodological systems of Carl Orff, Emile Jacques Delcroze and Zoltan Kodaly. Both music and language are learnt in the same way through the process of listening and performing, reading and writing.

It has been established that the curricular learning objectives in different ways of expression sometimes deviate from the needs of the real environment and European guidelines in terms of developing general competencies and communicative abilities. To this end, a study presented in this article has been carried out. The study titled *Movement through a fairy tale with music* presents a cross-sectoral integration of movement, language and art – music.

Methods. The study included 19 children (8 boys) aged 2 to 4 years of age. At the time of the study, the children were healthy and in suitable sports clothing. Guided physical/sports activities were performed with narrating three fairy tales, and at the same time we used the observation method. Children's responses were simultaneously recorded on a pre-prepared observation sheet.

Results. Based on the observation of children in physical/sports activities, we can confirm that knowing the content of the fairy tale will encourage the child to participate actively. A fairy tale with music enables children to express their experiences with movement. Children listened to and imitated the adult narrator, but they also searched for their own modes of movement and they emotionally expressed their experiences and imitated the sounds of animals. Music encouraged children to move in the playroom with their whole bodies at a different pace.

Conclusion. The results of the research show that the integration of different sectors and school subjects is being introduced as a novelty in the renovation of curriculum in Slovenian education. This has been carried out in primary and secondary schools, but to a lesser extent in the pre-school period. At the time of the research project, we realized that the presented examples are not only interesting and innovative, but they also integrate three different fields in a logical whole: the fields of movement, language and

music as part of the artistic field. Nevertheless, they are also very suitable for pre-school children. The findings about the importance of movement for the child's integrated development could be transferred to all sectors of curriculum and try to seek the ways of connecting movement with language, society, nature, mathematics and art.

In the pre-school period, there is a need for high awareness that the environment offers the child more opportunities for active and comprehensive learning. The child is accepted as an individual, given the opportunity to choose and participate in the planning of acquiring different experiences. The child is precisely directed, guided and stimulated, while being allowed to preserve the child's world, to perceive events through all the senses, in a specific manner, through play and movement.

Key words: Cross-sectoral integration, cross-curricular integration, motivation, opens model, preschool children.

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PARENTAL INFLUENCE ON MOTOR DEVELOPMENT MILESTRONES OF A CHILD

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The thesis entitled Parental influence on motor development milestones of a child consists of theoretical and empirical part. The theoretical part presents exercise and sport, milestones in a child's motor development, the involvement of children in additional sports activities and the role of family in sport. The aim of the empirical part of the thesis was to verify how active parents are in sport, how active children are in sport, how active parents together with their children are in sport, whether reaching certain milestones in a child's motor development depends on having an older sibling and the age of parents. The empirical part of the thesis presents our findings, gained in our survey and its answers. Specific population of 236 parents of children aged 2-6 years from kindergartens located in Korena, Duplek and Tezno has been included in the survey. Quantitative technique of collecting and analyzing the data has been used. The data obtained were analyzed with a quantitative technique of data processing (t-test, analysis of variance, χ^2 -test, Levene's Test for Homogeneity of Variance). The results of our survey show parents have no effect on the time when children reach their milestones in motor development.

Key words: exercise, sport, organized sports activities, milestones, parents' influence

VPLIV STARŠEV NA MEJNIKE V GIBALNEM RAZVOJU OTROKA

Izhodišča. Glede na to, da je vzor staršev še kako pomemben v življenju otrok, smo želeli raziskati ali vpliva na gibalni razvoj otroka.

Metode. V raziskavo smo vključili neslučajnost vzorec in iz konkretne populacije 236 staršev otrok, starih 2–6 let iz vrtcev Korena, Duplek in Tezno. Uporabili smo kvantitativno tehniko zbiranja podatkov (anketo). Pridobljene podatke smo obdelali s kvantitativno tehniko obdelave podatkov (t-preizkus, analize variance, χ^2 -preizkus, Levenov test homogenosti varianc).

Rezultati. Ne obstaja statistično značilna razlika v obdobju doseganja mejnikov glede na starost staršev, niti ne glede na to ali ima otrok starejšega sorojenca.

Povezave med vključenostjo otroka v organizirano vadbo in pogostostjo telesne aktivnosti mame ne moremo potrditi, kakor tudi ne povezave med vključenostjo otroka v organizirano vadbo in pogostostjo telesne aktivnosti očeta. Visoka vrednost χ^2 (9) = 65,8; $p < 0,001$ (kritična vrednost za $df = 9$ je 21,67) kaže na močno soodvisnost med pogostnostjo telesne vadbe mame in očeta.

Hipotezo (Starši, ki so sami bolj športno aktivni pogosteje vključujejo otroka v dodatne športne dejavnosti kot starši, ki sami niso športno aktivni.) smo zavrnil.

Na osnovi rezultatov analize variance smo hipotezo (Otroci staršev, ki so bolj športno aktivni skupaj s svojimi otroki prej dosegaajo mejnike v gibalnem razvoju od otrok staršev, ki so manj športno aktivni ali pa sploh niso športno aktivni skupaj s svojimi otroki) zavrnil.

Zaključek. Na osnovi dobljenih rezultatov sklepamo, da pogostost telesne aktivnosti tako mame kot očeta, nima statistično značilnega vpliva na čas v katerem otrok doseže gibalne mejnike. Trdimo lahko, da otroci dosežejo razvojne gibalne mejnike po svojem notranjem času (v povprečju enako). Starši, ki so sami bolj športno aktivni, ne vključujejo pogosteje svojih otrok v dodatne športne dejavnosti kot starši, ki niso športno aktivni. Razlog je morda ta, da so otroci športno bolj aktivnih staršev vseeno bolj aktivni v prostem času, organizirana športna vadba ne igra vloge. Ugotovitve kažejo tudi na to, da pri doseganju gibalnih mejnikov ne igra vloge koliko se starši športno

ukvarjajo s svojim otrokom, saj najbrž otrok dosega mejnike, kot smo že ugotovili, po individualnem, povprečnem času.

Čeprav smo vse hipoteze zavrnil, otrok početje odraslih zmeraj posnema, pa naj bo to početje dobro ali malo manj dobro. Velikokrat slišimo, kako smo podobni staršem. To je zato, ker se po nekaj letih opazovanja, zavednega in nezavednega, življenja s starši začnemo obnašati, bolj ali manj, kakor oni. Vrednote, ki so bile pomembne njim, so pomembne otrokom.

Ključne besede: gibanje, šport, organizirane športne aktivnosti, mejniki, vpliv staršev

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THE STABILITY OF SPORTS PRECONDITIONS IN CHILDHOOD

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Introduction. The purpose of the study was to determine time stability of individual sports preconditions in elementary school children.

Methods. The sample included 86 children (44 girls and 42 boys) who attended 1st and 2nd grades at elementary school. The children participated in pretest in June 2016 and posttest in June 2017 by performing 10 physical fitness tests: bent arm hang, standing broad jump, 4 x 10 meter shuttle run, 50-meter sprint, sit-ups in 60 seconds, stand-and-reach, 20-meter endurance shuttle run, repeated routine with a stick, rolling of three balls, and flag chasing game. We used pretest and posttest scores to determine the time stability of children's sports preconditions. To determine correlations between paired data, we used partial and canonical correlations.

Results. Girls showed significant correlations for all physical fitness tests, except 50-meter sprint, $r(44) = .23$, and 20-meter endurance shuttle run, $r(44) = .23$. Boys showed significant correlations for all physical fitness tests, especially for bent arm hang, $r(42) = .92$, $p < .01$, stand-and-reach, $r(42) = .87$, $p < .01$, 50-meter sprint, $r(42) = .83$, $p < .01$, and sit-ups in 60 seconds, $r(42) = .81$, $p < .01$, and a nonsignificant correlation for repeated routine with a stick, $r(42) = .35$. Of all physical fitness tests, low degree of correlation was found in particular for the tests of motor coordination.

Conclusions. We may conclude that boys showed higher time stability of sports preconditions than girls. The relationships between pretest and posttest scores for both genders were relatively strong.

Key words. talent, motor ability, physical fitness, elementary school

INTERVENTION PROGRAMME FOR PHYSICAL INACTIVITY OF YOUNGER CHILDREN DURING THE MUSIC LESSON

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Introduction. General recommendations for exercise/sport activities state that children and adolescents should be engaged in medium to high intensity movement or sport activities for at least 60 minutes on a daily basis. However, these recommendations focus only on medium to high intensity movement or sport activities and do not take into account the time of physical inactivity. The latter takes up much of children's time, especially in the morning during school hours.

Educational institutions represent an exceptional opportunity for the implementation of intervention programs aimed at reducing the inactivity of all children during school lessons. Introducing movement activities during lessons that do not generally include them, could reduce the time of physical inactivity of children during such lessons. That is the reason behind our decision to carry out an intervention program aimed at reducing the physical inactivity during music lessons.

Method. The study included 108 children aged between six and eight years. The movement activities of children was measured with accelerometers during two music lessons with the same learning goals. However, the first lesson was carried out in the usual way without the involvement of movement activities, while the second lesson included movement activities in order to reduce physical inactivity of children. The aim of the study was to compare how the amount of physical inactivity differs in both cases.

Results. We found that during the lesson with included movement activities we could lower the inactivity by 38% compared to the lesson without movement activities included and there was no difference between female and male participants. We also found that the proportion of time partici-

pants engaged in low, middle and high intensity movement activities introduced during the lesson increased for boys and girls.

Conclusion. We focused mainly on the proportion of various phenotypes of intensity of movement/sports activities during the usual music lesson and the one with physical activities included. However, we were not paying attention to whether the learning goals were achieved for a particular music lesson and have not included these measurements into the method. The future studies should incorporate also this important aspect of the learning process.

Key words: physical/sport activity, music art, cross curricular, accelerometers

INTERVENCIJSKI PROGRAM ZA GIBALNO NEAKTIVNOST MLAJŠIH OTROK MED POUKOM GLASBENE UMETNOSTI

Izhodišča. Okvirna priporočila za gibalno/športno aktivnost navajajo, da naj bi bili otroci in mladostniki vsakodnevno deležni vsaj 60 minut ali več srednje do visoko intenzivne gibalne/športne aktivnosti. Obstoječa priporočila so osredotočena zgolj na srednjo in visoko intenzivnost gibalne/športne aktivnosti, ne izpostavljajo pa časa gibalne neaktivnosti. Otroci pretežni del dnevnega časa namenijo prav gibalni neaktivnosti, katere so deležni predvsem v dopoldanskem času, v času šolskega pouka.

Vzgojno-izobraževalne ustanove predstavljajo izjemno priložnost za izvajanje intervencijskih programov, katerih namen je zmanjšati gibalno neaktivnost vseh otrok med šolskim poukom. Vključitev gibalne aktivnosti med učne ure, ki niso gibalne narave, ponujajo veliko priložnost, da otroci zmanjšajo gibalno neaktivnost med šolskim poukom. Prav zato smo se odločili, da izvedemo intervencijski program, katerega namen je zmanjšati gibalno neaktivnost med učno uro glasbene umetnosti.

Metode. V raziskavo je bilo vključenih 108 otrok, starih med šest in osem let. Gibalno aktivnost otrok med dvema urama glasbene umetnosti smo merili z merilniki pospeška. Pri obeh urah smo si zastavili iste učne cilje. Vendar

smo prvo uro izvedli na običajen način brez vključitve gibalne aktivnosti, pri drugi uri pa smo vključili gibalno aktivnost, s katero smo želeli zmanjšati gibalno neaktivnost in primerjati za koliko se gibalna neaktivnost razlikuje obema primeroma.

Rezultati. Ugotovili smo, da je med intervencijsko uro glasbene umetnosti delež časa gibalne neaktivnosti manjši za 38 % kot med običajno uro glasbene umetnosti, poudariti pa moramo, da se med obema spoloma gibalna neaktivnost enako zmanjša. Ugotovili smo tudi, da se dečkom in deklicam enako poveča delež časa v nizki, srednji in visoki intenzivnosti gibalne/športne aktivnosti.

Zaključek. Med raziskavo nismo bili pozorni na to, ali smo dosegli zastavljene cilje učne ure glasbene umetnosti. Osredotočili smo se na delež časa različnih fenotipov intenzivnosti gibalne/športne aktivnosti med običajno in intervencijsko uro glasbene umetnosti. Prav zato bi bilo smiselno, da prihodnje študije namenijo pozornost tudi temu ali so med običajnimi in intervencijskimi urami doseženi zastavljeni cilji.

Ključne besede: gibalna/športna aktivnost, glasbena umetnost, medpredmetno povezovanje, merilniki pospeška

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THE ROLE OF COORDINATION IN JUMPING PERFORMANCE IN 4- TO 6-YEAR OLD CHILDREN

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Background. Children are developing their fundamental movement skills very early; when playing with other children different movements are involved in the game. One of the several simple fundamental movements (like walking, running, climbing, crawling) is also jumping. A common fundamental movement skill frequently observed in physical education and sports programs is the vertical jump, as a means to assess lower limb explosive power. Although vertical jumping is often used in physical performance tests for both children and adults, there is a lack of research regarding jumping performance in pre-school children when the development of fundamental movement skills begins. Only few studies focused on jumping performance in primary and secondary school children and only two in pre-school children. Therefore, the purpose of the study was to longitudinally investigate differences in jumping performance, regarding height and coordination, between boys and girls at age 4, 5 and 6 years.

Methods. Counter-movement jumps with arms and without arms were performed in 79 preschool children (43% boys), followed yearly from 4 to 6 years. Jumping height was estimated from force impulse assessed by force ground platform and coordination was assessed from lateral high-speed video assessment. Jumping coordination was qualitatively classified as: poor (hands do not follow the body movement, they move backwards, or not at all.), average (hands are somewhat included in jumping performance, but less intensively or with less amplitude), excellent (hands follow the vertical jump in all phases, correct timing, intensity and amplitude). The data were analyzed to determine differences between gender, age and arm-leg coordination (poor, average or excellent). Two-way Analysis of variance (ANOVA) was used to test for differences between gender and age. Longitudinal changes were analyzed with repeated measures ANOVA, where improvement in

jump performance of coordinated and non-coordinated jumpers was analyzed with repeated measures ANOVA and one fixed factor (jump coordination).

Results. Jumping height (with and without arms) increased with age ($P < 0.001$); however, we could not confirm gender differences neither interaction age*gender. We also observed that the children with excellent coordination progress more intensively than others, the average coordinated jumpers still show progress, whereas the children with poor coordination do not progress at all.

Conclusion. The results of this study indicate that the vertical jump coordination is an important factor for jumping performance in 4-6-year-old children. Older children achieve better jumping performance as well as better jumping coordination, where better jumpers achieve better coordination at earlier age. Study suggests that emphasis should be put on exercising and learning proper jumping technique as this could easily increase jumping performance for as much as 20-25%. The obtained data also indicate wide variability of results and thus suggesting an individualized approach for efficient improvement of fundamental movement skills.

Keywords: jump height, kindergarten, explosive power, coordination

Acknowledgements: Abstract present a work from a national research project J5-2397 entitled »Analysis of Elementary Body Movement Patterns and Adaptation of Skeletal-Muscular System to Certain Modern Lifestyle Factors in Children between the Age of 4 and 7«. The project was financed by the Public Agency for Research of the Republic of Slovenia.

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PHYSICAL ACTIVITY OF YOUNG ATHLETES AND MUSICIANS

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Introduction. Physical inactivity is not only important health factor in non-athletes but also in athletes. Studies are supporting the same or even higher health risks in non-athletes due to high proportion of physical inactivity, and stress of bursts of sport exercise with high mental demand. Not only athletes, musicians are also facing local body stress, disrupt posture leads towards chronic health consequences.

Studies in last decades report that children are not reaching the recommendations of daily physical activity levels. A lifestyle that includes sufficient and quality physical activity is important factor of health, it has positive impact not only on the health conditions and physical development of the child and adolescent, but also on development of their cognitive, emotional and social skills. However, it is unknown if physical activity levels of athletic children are similar to those of non-athletes.

Methods. Using accelerometers we monitored 69 (15 males) young athletes (age: 12.6 ± 2.9 years) for six consecutive days and 37 (21 males) young musicians (age: 12.7 ± 2.9 years) for 5 consecutive days. Young athletes were selected among those who practise sport at least twice a week, while young musicians were selected among those who regularly play music instruments at least twice a week.

Results. We found that young athletes achieve similar overall physical activity levels as young musicians (637.4 ± 235.6 cpm vs. 551.2 ± 235.8 cpm; respectively; $P = 0.37$). Physical inactivity was lower in young musicians than in young athletes (529.9 ± 61.9 cpm vs. 462.2 ± 66.1 cpm, respectively; $P < 0.001$). Moderate to vigorous physical activity was higher in young athletes than in young musicians (117.7 ± 39.7 cpm vs. 77.7 ± 31.3 cpm, respectively; $P < 0.001$). Almost all young athletes (97,1 %) reach recommended values of physical activity and only 27.8 % of musicians.

Conclusions. When our data are compared to those of non-athletic children we found similar levels of overall physical activity in young athletes and young musicians. However, we found higher physical inactivity and lower moderate to vigorous physical activity in young musicians yielding only 28 % of them reaching minimal daily physical activity recommendations.

Despite overall physical activity was equal between both groups we should focus in lower physical inactivity and also lower moderate and vigorous physical activity in musicians. As physical inactivity and moderate and vigorous physical activity are important health factors one should consider interpolate between both factors, specifically, in musicians and both factors yield negative consequences to their health.

Key words: physical activity, young athletes, young musicians, accelerometer

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STEP UP A GEAR

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Numerous studies have shown that today's children aren't sufficiently physically active. Only a small minority of children meet the minimum recommended level of daily physical activity, which corresponds to an increase in average body mass and increased levels of occurrence of obesity and other chronic diseases.

The goal of the research was to examine physical activity habits of fifth-grade children. The amount, intensity and variability of physical activity was measured by accelerometer and compared both within and across daily time and days, respectively. Furthermore, we compared physical activity between genders and estimate correlations between physical activity and Body Mass Index (BMI).

The sample includes 48 children between the ages of ten and eleven years – 27 female, 21 male – from the Upper Carniola traditional region of Slovenia. Physical activity was measured with hip-worn accelerometers for six consecutive days (four week days and during the weekend).

We discovered that there is a 74.3 % ($p=0.001$) higher physical activity in afternoons compared to mornings. We've discovered no difference in activity between weekdays and weekends. The total daily amount of physical activity did not reach the recommended levels (60 minutes of moderate to vigorous physical activity), which were met by only 4 % of the participants. Furthermore, we discovered that boys spend 16 % ($p=0.002$) more time in moderate to vigorous physical activity than girls, and girls spent 7,9 % ($p=0.002$) more time in physical inactivity. We found no correlation between children's BMI and the amount and intensity of physical activity.

Considering the results of the analysis, it is recommended that the amount and intensity of children's physical activity in school and during weekend should be increased in order to achieve daily recommendations. However,

for weight regulation it seems that more complex interventions are needed, with diet regulation and targeted exercise.

Key words: primary school, accelerometers, obesity, moderate to vigorous physical activity, exercise.

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INFLUENCE OF FOREST KINDERGARTEN ON A CHILD'S LOCOMOTOR DEVELOPMENT

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With the present research we wanted to figure out how staying in the forest affects the locomotor development of a child. For this purpose we carried out an experiment lasting for 12 months. In the study we used a non-coincidental sample from a specific population of children. There were 61 children of both sexes, aged 5 to 6 years, who took part in the study.

The experimental group consisted of 28 children from the Kindergarten Ivančna Gorica in which there were many locomotor activities performed in the forest. The control group consisted of 33 children from the kindergarten located in the southern part of Slovenia. These children exercise their locomotor activities in the gym and outside the kindergarten, but not as often as the children from the experimental group.

We used a quantitative technique to collect data, namely 12 different locomotor tests, which we repeated five times over a period of one year. By doing so, we wanted to measure whether children who spend more time in the woods achieve better results in locomotor tests than children who spend less time in the forest and whether staying in the forest positively affects the child's locomotor development.

Two statistical methods were used to evaluate the results, namely, a T-test and a Z-value. The calculation of the T-test showed a statistically significant difference between the groups in favour of the experimental group ($p = 0.000$; $p < 0.05$), based on which we can confirm that the children who spend more time in the forest achieve better results in locomotor tests than the children who spend less time in the forest. Also, the standardization of the results showed that the children from the experimental group achieved a better result (0.334) than the children from the control group (-0.283). Ba-

sed on these calculations, we can confirm that staying in the forest positively influences the child's locomotor development.

The emphasis, that the movement of the child is a primary necessity, is found almost in every book that describes the preschool period, but nevertheless, we believe that this too often remains just a theoretical fact. The nature, and with it the forest, can be our largest classroom or just the largest space where we can move freely without restrictions. It offers us a wide variety of props and workout areas. By taking the child to the forest, we do not only promote locomotor development, but we also influence the child's integral development. Forest is an ideal teaching environment that brings new opportunities for creative playing of the child, as well as lifelong learning, exploring and development of self-esteem and self-confidence. The natural environment means a dynamic and diverse playground to children where they can carry out various locomotor activities in a relaxed and free manner. The forest is an environment that constantly surprises us with unexpected situations and in this way it offers many locomotor stimulations that the child can perform through his or her playing, exploring and finding their own ideas in overcoming the obstacles encountered on the forest path.

Key words: locomotor activities, a forest, a preschool child, locomotor abilities

VPLIV GOZDNEGA VRTCA NA GIBALNI RAZVOJ OTROKA

Z raziskavo smo želeli ugotoviti, kako gozdni vrtec vpliva na gibalni razvoj otroka. V ta namen smo izvedli eksperiment, ki je trajal 12 mesecev. V raziskavi smo uporabili neslučajnostni vzorec iz konkretne populacije otrok. Sodelovalo je 61 otrok obeh spolov v starosti od 5-6 let.

Eksperimentalno skupino je sestavljalo 28 otrok iz vrtca Ivančna Gorica v katerem je veliko gibalnih aktivnosti izvedenih v gozdu. Kontrolno skupino je sestavljalo 33 otrok iz vrtca, ki se nahaja v južnem delu Slovenije. Ti otroci gibalne aktivnosti izvajajo v telovadnici in zunaj vrtca, vendar ne tako pogosto kot otroci iz eksperimentalne skupine.

Za zbiranje podatkov smo uporabili kvantitativno tehniko, in sicer 12 različnih gibalnih testov, ki smo jih ponovili petkrat v obdobju enega leta. Z njimi smo želeli izmeriti, ali otroci, ki več časa preživijo v gozdu, dosegajo boljše rezultate na gibalnih testih kot otroci, ki v gozdu preživijo manj časa, in če bivanje v gozdu pozitivno vpliva na gibalni razvoj otroka.

Za vrednotenje rezultatov smo uporabili dve statistični metodi, in sicer T-test in Z-vrednost. Izračun T-testa je pokazal statistično pomembno razliko med skupinama v korist eksperimentalne skupine ($p = 0,000$; $p < 0,05$), na osnovi česar lahko potrdimo, da otroci, ki več časa preživijo v gozdu, dosegajo boljše rezultate pri gibalnih testih kot otroci, ki preživijo v gozdu manj časa. Prav tako je standardizacija rezultatov pokazala, da so otroci iz eksperimentalne skupine dosegli boljši rezultat (0,334) kot otroci iz kontrolne skupine (-0,283). Na podlagi teh izračunov lahko potrdimo, da bivanje v gozdu pozitivno vpliva na gibalni razvoj otroka.

Poudarek, da je gibanje otrokova primarna potreba, zasledimo skoraj že v vsaki knjigi, ki opisuje predšolsko obdobje, a kljub temu menimo, da to prevečkrat ostaja le teoretično dejstvo. Narava in z njo tudi gozd sta lahko naša največja učilnica ali zgolj največji prostor, kjer se lahko gibamo svobodno brez omejitev. Ponujata nam veliko raznolikih rekvizitov in vadbenih površin. S tem, ko otroka popeljemo v gozd, ne spodbujamo samo gibalnega razvoja, temveč tudi vplivamo na otrokov celostni razvoj. Gozd je idealno okolje za poučevanje, ki s seboj prinaša nove priložnosti za ustvarjalno igro otroka kot tudi vseživljenjsko učenje, raziskovanje ter razvijanje samozavesti in samozaupanja. Otrokom predstavlja dinamično in raznoliko igrišče, kjer lahko na sproščen in svoboden način izvajajo različne gibalne aktivnosti. Gozd je okolje, ki nas vedno znova preseneti z nepričakovanimi situacijami in na ta način nudi veliko gibalnih spodbud, ki jih lahko otrok izvaja preko igre, raziskovanja in iskanja lastnih idej pri premagovanju ovir, s katerimi se srečuje na gozdni poti.

Ključne besede: gibanje, gozd, predšolski otrok, gibalne sposobnosti

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OPTIMIZATION OF PHYSICAL EDUCATION CLASS FOR DEVELOPING ENDURANCE

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Basic recommendations for daily physical activity of children and adolescents suggest that children and adolescents aged between five and seventeen benefit from at least 60 minutes of moderate-to-vigorous daily physical activities. In order to achieve the minimum recommended daily physical activity, organised exercise can be of great help during PE classes within which every child should at least 50 percent of time be engaged in moderate-to-vigorous physical activity. Unfortunately, in Slovenia as in many other countries, less than half of the young people reach the recommended amount of daily physical activities, while the majority of children do not reach recommended daily amount of physical/sports activities during PE classes, resulting in the decline of all their physical and functional abilities. A significant decline is observed especially in physical capacity, and, in particular, physical endurance. The decline of general physical endurance of children may be due to the lack of aerobic, physical and sports contents in everyday life and during PE classes. We believe that especially moderate-to-vigorous physical activities should be promoted during PE classes, however, paying attention to the quality of performance of the classes.

The purpose of the research was to measure the amount and the intensity of physical activity of children by the use of an accelerometer during PE classes with athletics content focused on developing general endurance. On the basis of the obtained data we developed a model PE class aimed to improve the PE class of the first measurement and achieve that children are engaged in at least 50% of moderate-to-vigorous physical activity.

Within the research we collected empirical data using the descriptive and quasi-causal experimental method of empirical educational research. We carried out two surveys. In the first independent study we measured the amount and the intensity of the PE class of 83 children (40 girls and 43 boys),

aged 10 to 15 from two different primary schools. The content of the PE class was athletics and the main objective was to develop general endurance. In the second study the purpose was to increase moderate-to-vigorous physical activity of children and youth (5 girls and 5 boys) during PE classes. It included 10 children and youth (5 girls and 5 boys), aged 12 to 15.

We have found that children examined in the first research did not reach the PE class recommendations. They were also physically inactive for more than 10 minutes. In the newly developed model PE class the children and youth reached the PE class recommendations. They were physically inactive for less than 10 minutes. A comparison between the two classes showed that our newly developed model class has been very successful. In the end we would like to recommend that intervention programmes are introduced with the purpose of increasing the amount and the intensity of children and youth physical activity.

Key words: physical activity, physical inactivity, children and youth, accelerometer, intervention program

OPTIMIZACIJA URE ŠPORTA ZA RAZVOJ VZDRŽLJIVOSTI

Okvirna priporočila za dnevno gibalno/športno aktivnost otrok in mladostnikov narekujejo, da naj bodo otroci in mladostniki med petim in 17. letom deležni vsaj 60 minut srednje do visoke intenzivnosti dnevne gibalne/športne aktivnosti. Za doseganje dnevnih minimalnih priporočil gibalne/športne aktivnosti je lahko v veliko pomoč organizirana vadba med uro športa, znotraj katere naj bi vsak otrok dosegel med uro športa vsaj 50 odstotkov časa srednje in visoke intenzivnosti gibalne/športne aktivnosti. Žal v Sloveniji in v drugih državah priporočenih vrednosti dnevne gibalne/športne aktivnosti ne dosega niti polovica mladih prav tako večina otrok ne dosega priporočil gibalne/športne aktivnosti med uro športa, kar povzroča upad vseh gibalnih in funkcionalne sposobnosti. Izrazit upad se kaže predvsem v telesni zmogljivosti, zlasti splošni vzdržljivosti. Upad splošne vzdržljivosti otrok je lahko posledica pomanjkanja aerobnih, gibalnih in športnih vsebin v vsakdanjem življenju in pri urah športa. Pri urah športa bi morali spodbu-

jati predvsem srednjo do visoko intenzivno gibalno/športno aktivnost, kljub temu pa paziti na samo kakovost izvedbe ure.

Namen raziskave je bil s pomočjo merilnika pospeška med urami športa, katerih vsebina je atletika, glavni cilj pa je bil razvijati splošno vzdržljivost, izmeriti količino in intenzivnost gibalne/športne aktivnosti otrok. Na podlagi pridobljenih rezultatov smo oblikovali novo modelno uro športa, s katero smo želeli izboljšati rezultate ure športa prvotnih meritev, in sicer, da so otroci deležni vsaj 50 odstotkov časa srednje in visoke intenzivnosti gibalne/športne aktivnosti.

V okviru izvedbe kvantitativnega raziskovanja smo za zbiranje empiričnih podatkov uporabili deskriptivno in kvazikavzalno eksperimentalno metodo empiričnega pedagoškega raziskovanja. Izvedli smo dve raziskavi. Pri prvi samostojni raziskavi smo merili količino in intenzivnost ure športa 83 otrok (40 deklet in 43 fantov), starih od 10 do 15 let iz dveh osnovnih šol, katere vsebina je bila atletika, glavni cilj pa razvijati splošno vzdržljivost. V drugo raziskavo, katere namen je bil povečati srednjo in visoko intenzivnost gibalne/športne aktivnosti otrok in mladostnikov med uro športa, je bilo vključenih 10 otrok in mladostnikov (5 deklet in 5 fantov), starih od 12 do 15 let.

Ugotovili smo, da otroci in mladostniki, vključeni v prvo raziskavo med uro športa niso dosegli priporočil, ki veljajo za ure športa. Prav tako so bili gibalno neaktivni več kot 10 minut. Med novo razvito modelno uro športa so otroci in mladostniki dosegli priporočila, ki veljajo za ure športa. Gibalno neaktivni pa so bili manj kot deset minut. Primerjava med obema urama je pokazala, da je bila naša nova modelna ura zelo uspešna. V zaključku lahko priporočamo, da se začnejo izvajati intervencijski programi, s katerimi bomo lahko povečali količino in intenzivnost gibalne/športne aktivnosti otrok in mladostnikov.

Ključne besede: gibalna/športna aktivnost, gibalna neaktivnost, otroci in mladostniki, merilnik pospeška, intervencijski program

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FEEDBACK IN LEARNING OF STANDING LONG JUMP IN PRESCHOOL CHILDREN

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Introduction. During training coaches provide feedback to correct errors encountered while performing a motor task to improve child performance in the next attempt. Feedback enhances motor learning (Magill, 2003). Extrinsic feedback information can be categorized as "knowledge of result" and "knowledge of performance" (Magill, 2003). Knowledge of performance is information about the characteristics of the movements that lead to the ultimate performance of the motor task (Magill, 2003). The aim of this study was to determine the effects of various exercise procedures on standing long jump learning in preschool children. Specifically, to what extent the feedback information influences the technique and distance in standing long jump.

Methods. The study involved 53 pre-school children (24 boys and 29 girls) divided into 3 groups (100% feedback, 50% feedback and 0% feedback). Distance of the long jump was measured with standing long jump met (Elan, Slovenia) and the technique was scored using jump test from the Test of gross motor development, second version (TGMD-2) (Urlich, 2000). Initial and final measurements consisted of distance of the long jump and long jump technique. After initial measurement, a 60 repetitions were done in which the children received certain feedback depending on the group they were in. The differences between the groups over time were determined by the analysis of variance for repeated measurements (RM ANOVA).

Results. The main findings of the research showed that, regardless of the amount of feedback, children improved the distance of the long jump and the technique of performance. Significant effects for time (before - after) ($F = 20.29$, $P = 0.001$) were determined. There are visible effects of distance covered in all groups ranging from 5 to 8%.

Conclusions. The main results of this research show that regardless of the amount of feedback, children under the influence of the exercise and a certain number of repetitions jump further and technically more correctly. The practical applicability of this research is seen in the use of concentrated concentric blocks of teaching certain motor skills over a shorter period of time, compared to evenly distributed contents with a smaller number of repetitions over a longer period of time. This is applicable in the system of education, sports clubs and playrooms, and in play with parents. Furthermore, it raises the question of engagement of different quality teachers in teaching basic motor skills.

Key words: Motor development, knowledge, exercise, training

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QUALIFICATION OF KINDERGARTEN TEACHER FOR IDENTIFICATION OF MOTOR TALENTED CHILDREN IN KINDERGARTEN

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Introduction. Motor talent is depends of the complementarity between the genetic concept and the environment in which the child lives. Identification of motor talented children is carried out using various methods (tests of motor abilities, systematic monitoring of motor development, structured observation of the use of motor skills in various daily activities, guided interview with children and parents). The identification of the motor talented children in the pre-school period is to identify motor talented children and to offer them with the development of all motor potentials with quality sports activities. This creates the conditions for the later integration of these children into competitive sport and the achievement of top sports results. This paper presents a research of the qualifications of kindergarten teacher to identify motor talented children in kindergarten. We anticipated that there was a difference in the identification of motor talented children among kindergarten teacher according to certain non-dependent variables.

Methods. We used a causal-non-experimental research method. The research sample represents 99 kindergarten teacher. We obtained the data with a closed-type questionnaire. The statistical processing of the responses of a questionnaire is a frequency distribution and t-test. The sample presented by *gender, age, place of residence of kindergarten, employed period in a kindergarten, education level, personal sports activities in their spare time, skills for working with motor talented children and where kindergarten teacher get the most information about the work with motor talented children*. All these parameters represent the non-dependent variable. Dependent variable represents the *opinion the kindergarten teacher on their skills to identify the motor talented children*.

Results. To evaluate our prediction we used the Independent Samples t-Test ($p < 0.05$). We found a statistically significant difference only between the variables *personal sporting activity educators in their free time* and *opinion the kindergarten teacher on their skills to identify the motor talented children* ($p = 0.000$). Kindergarten teacher who are more active in their free time (every day or several times a week) believe that identify the motor talented children in the kindergarten sport activities. Kindergarten teacher who are less active in sports (several times a month or only on holiday) or are not sport activity, consider that they do not identify the motor talented children by sport activities in the kindergarten. Statistically significant difference of the dependent variable with the other non-dependent variables is not detected.

Conclusions. Based on the findings of the present research, we believe that the kindergarten teachers should be further trained to monitoring the motor development of children, which would enable them using different methods to better identification the motor talented children in kindergarten. This would also provide the necessary data for the preparation and design of high-quality physical fitness activities for the additional motor incentives of motor talented children. Potentially, these children will be able to maximize motor development during the pre-school period and achieve top-class sports results in later years.

Key words: motor talent, early detection, *kindergarten teacher*, children

USPOSOBLJENOST VZGOJITELJEV ZA PREPOZNAVANJE MOTORIČNO NADARJENIH OTROK V VRTCU

Izhodišča. Motorična nadarjenost je odvisna od medsebojnega dopolnjevanja genske zasnove in okolja, v katerem otrok živi. Prepoznavanje motorično nadarjenih otrok poteka s pomočjo različnih metod (testi motoričnih sposobnosti, sistematično spremljanje motoričnega razvoja, strukturirano opazovanje uporabe motoričnih spretnosti v različnih vsakodnevnih dejavnostih, vodeni intervju z otroki in starši). Namen prepoznavanja motorično nadarjenih otrok v predšolskem obdobju je identificirati motorično nadar-

jene otroke in jim s kvalitetnimi gibalnimi/športnimi vsebinami ponuditi možnost razvoja vseh motoričnih potencialov ter tako ustvariti pogoje za kasnejše vključevanje teh otrok v tekmovalni šport in doseganje vrhunskih športnih rezultatov. V prispevku je predstavljena raziskava o usposobljenosti vzgojiteljev za prepoznavanje motorično nadarjenih otrok v vrtcu. Predvidevali smo, da obstaja razlika v prepoznavanju motorično nadarjenih otrok med vzgojitelji glede na določene neodvisne spremenljivke.

Metode. Uporabili smo kavzalno-neeksperimentalno metodo raziskovanja. Raziskovalni vzorec predstavlja 99 vzgojiteljev v vrtcih. Podatke smo pridobili z anketni vprašalnikom zaprtega tipa. Za statistično obdelavo odgovorov anketnega vprašalnika smo uporabili frekvenčno distribucijo in t-test. Vzorec je predstavljen po *spolu, starosti, kraju vrtca, dobi zaposlitve v vrtcu, stopnji izobrazbe, osebni športni aktivnosti v prostem času, usposobljenosti za delo z motorično nadarjenimi otroki* in *kje so vzgojitelji dobili največ informacij o delu z motorično nadarjenimi otroki*. Vsi ti parametri predstavljajo neodvisno spremenljivko. Odvisno spremenljivko predstavlja *mnenje vzgojiteljev o njihovi usposobljenosti za prepoznavanje motorično nadarjenih otrok*.

Rezultati. Za vrednotenje našega predvidevanja smo uporabili t-test ($p < 0,05$). Ugotovili smo, da obstaja statistično značilna razlika samo med spremenljivkama *osebna športna aktivnost vzgojiteljev v njihovem prostem času* in *mnenje vzgojiteljev o njihovi usposobljenosti za prepoznavanje motorično nadarjenih otrok* ($p = 0,000$). Vzgojitelji, ki so v svojem prostem času več športno aktivni (vsak dan ali večkrat na teden), menijo, da pri gibalnih dejavnostih v vrtcu prepoznajo motorično nadarjene otroke. Vzgojitelji, ki so v svojem prostem času manj športno aktivni (nekajkrat na mesec ali samo med letnim dopustom) ali pa v svojem prostem času sploh niso športno aktivni, menijo, da pri gibalnih dejavnostih v vrtcu motorično nadarjenih otrok ne prepoznajo. Statistično značilna razlika odvisne spremenljivke z ostalimi neodvisnimi spremenljivkami ni zaznana.

Zaključek. Na osnovi ugotovitev predstavljene raziskave menimo, da bi bilo potrebno vzgojitelje v vrtcih dodatno usposobiti za spremljanje motoričnega razvoja otrok, kar bi jim s pomočjo različnih metod omogočilo lažje prepoznavanje motorično nadarjenih otrok. Tako bi pridobili tudi potrebne podatke za pripravo in načrtovanje kvalitetnih gibalnih/športnih dejavnosti za dodatne gibalne/športne spodbude motorično nadarjenih otrok, kar bi

potencialno tem otrokom omogočilo maksimalni motorični razvoj v predšolskem obdobju in doseganje vrhunskih športnih rezultatov v kasnejših letih.

Ključne besede: motorična nadarjenost, zgodnje odkrivanje, vzgojitelj, otrok

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THE EFFECTS OF PLYOMETRIC TRAINING ON JUMPING ABILITY IN RELATION TO APPROACH TECHNIQUES IN FEMALE VOLLEYBALL PLAYERS

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Introduction. The aim of this study was to investigate the effect of plyometric training on jumping ability in relation to the approach techniques in female volleyball players of cadet age. The jump represents any separation from the surface by the action of certain muscles, or by the personal effort of the jumper. Many athletes use in their trainings jumping exercises to improve their skills and thus achieve better results. This type of training is called plyometric training or just pliometrics. Pliometry can be defined as a set of exercises that allow the muscle to produce the maximum strength in as short a time as possible. Pliometry is therefore the way in which the speed of movement can be increased by making an explosive - reactive type of movement which, among other things, is important for a good vertical jump.

Methods. The total sample consisted of 25 female volleyball players cadets, registered volleyball club players, regularly attending training sessions during the training process. The work is conceptualized so that two tests are performed, initially and finally, and then they were compared. The experimental program was administered to the whole sample, the effects of the experimental program of the plyometric training on the development of jumping ability in female volleyball players were monitored. The subjects performed a special plyometric training to develop explosive leg strength. The experimental treatment included 15 trainings sessions. Data were processed by univariate and multivariate variance analysis, in the statistic program spss19.

Results and discussion. On the basis of the obtained results from the initial and final measurement, as well as statistical processing of the results in the final conclusion, the obtained results and their discussion enable us to conclude that plyometric training produces positive results on the jum-

ping technique in female volleyball players. All numerical differences are in favor of better results on final measurement, which are not high enough to be statistically significant. It is also necessary to take into account physical activities that are genetically predetermined and which cannot be significantly affected, but any progress is significant for the sport we have selected. This paper attempted to explain how important physical preparation for the volleyball game is, especially for the development of the jumping ability.

Key words: plyometric training, jumping ability, leg explosive strength, female volleyball players, volleyball techniques

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MOTHER'S PERCEPTION OF ACTIVE LEISURE TIME FACTORS OF PRESCHOOL CHILDREN

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Introduction. Ecological model of human development suggests that aspect of the home or neighbourhood environment, as well as personal factors, are likely to predict health behaviours such as physical activity (PA) or screen time. Despite the important role of environmental factors and parents as key factors of primary socialization, little is known about mother's beliefs and strategies regarding their children's PA in leisure time. Environmental (physical) factors such as living environment of a family (home, neighbourhood, facilities for PA) and the living conditions from the point of accessibility and safe, influence on PA of children and families importantly. These factors were analysed in the frame of national applied project "Analyses of elementary motor pattern, skeletal and muscles adaptation on specific sedentary lifestyle factors amongst 4 to 7 years old children".

Methods. With qualitative method of questionnaire and additional semi-structured interviews, mothers (n = 87) were asked to list most important reasons to distract members of the family to be physically active in their leisure time. Questions referred to the insights about perceived personal factors (scarce of time for PA because of more important tasks; personal (mother's) health status; child's health status, social factors (low financial or material status; cultural and individual view of the importance of PA) and physical environmental factors (low accessibility to sports facilities, low physical possibilities to execute PA and inappropriate weather conditions) influencing to low PA in leisure time of the family.

Results showed that most often reasons to distract mothers from leisure time activity with their children are: weather conditions (20 %) and scarce of time (19.8 %), low accessibility to sports facilities (7.5 %), child's health status (6.2 %), possibilities for PA (3.8 %) and low financial status and mothers' health status (2.5 %). Additionally, we compared children's results of their

elementary motor patterns assignments (motor efficiency) with mothers' answers. Answers confirmed that in the group of most motor efficient children mothers almost never reported reasons such as low physical possibilities to execute PA; scarce of time for PA, parent's and child's health status or low financial status while mothers of motor low-efficient children more often reported low environmental conditions for PA (accessibility and facilities), low material standard of the family and "tiredness" of parents which distract them to be PA in their leisure time. Additionally, living conditions of families showed another advantage for PA because motor efficient children mostly live in the house with yard (2/3) in suburbs or villages, while 50 % of motor low-efficient children lived in block of flats in town.

Discussion. Environmental factors (weather, facilitates and accessibility) play important role for active leisure behaviour of a family. Because it is hard to change, for example facilitates in a short time without local support, we need to pay attention to other personal and social factors and help deprived families (low income, single parents) to live more active leisure time.

Key words: leisure time behaviour, environmental factors, personal and social factors of PA

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EFFECTS OF ELECTRO MUSCLE STIMULATION ON THE CONTRACTILE PROPERTIES OF MUSCLES

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Introduction. Nowadays, there is a clear trend towards faster execution and movement in young athletes and the performance level is constantly rising. In young athletes, where the majority of the time is spent on specific training with reduced amount of time for gaining maximum speed, power and explosive strength, we would suggest new training methods to be applied such as electro muscular stimulation (EMS). Therefore, the aim of our study was to determine the effects of 8-week EMS training of non-dominant leg on the contractile properties of vastus lateralis (VL), vastus medialis (VM), and biceps femoris (BF) muscles of young female athletes. In addition, we also investigated the retained effects after 8 - weeks follow-up. The secondary aim was to investigate the contralateral EMS effect.

Methods. Nineteen young female athletes aged 15 to 18 years (average 16.4 ± 0.9 years), participated in our study. Subjects were randomly divided into the control (CG, $n = 8$) and the experimental group (EG, $n = 11$). During the first 8-week CG performed the isometric voluntary exercise doing single-leg hip raise exercise with non-dominant leg while the EG did EMS training of VL, VM and BF (non-dominant leg). For EMS training we used portable electrostimulators Cefar Rehab x2, CefarCompex Scandinavia AB, Sweden, Compex mi Sport and Compex SP 4.0., Compex®, Switzerland. Both groups performed exercise 3 times per week. EMS sessions consisted of 36 muscle contractions. Pulse frequency and width was set at 100 Hz and 400 μ s, respectively and were delivered with a 1 s of rise time, 3 s of contraction and 0.5 s of fall time. Pause lasted 17 s with pulsed currents of 8 Hz. The participants were tested at baseline, after 8 weeks of training and after 8 weeks of exercise completion (follow-up). The testing involved measurements of the maximal voluntary isometric contraction, the rate of force development of

knee extensors and flexors with knee dynamometer and tensiomyographic muscle response.

Results. We showed the maximal voluntary isometric contraction increments in the non-dominant knee extensors leg after 8-week of EMS training ($P = 0.085$, $ES = 0.87$), but the difference was no longer present at follow up ($P = 0,184$). Rate of force development in first 50 ms of knee extensors (non - dominant leg) was increased after 8 weeks of EMS training ($P = 0.049$, $ES = 0.85$) and remained slightly increased even at follow-up ($P = 0.090$, $ES = 2.17$). We observed interaction time * group in the TMG maximal displacement of VM (non-dominant leg) ($P = 0.044$), while there were no differences between the two groups after 8 weeks ($P = 0,602$) and 16 weeks ($P = 0,655$) of intervention. Contralateral effect was confirmed only in the TMG maximal displacement of VM ($P = 0.001$; $ES = 1.36$). Post hoc tests showed differences between the two groups after 8 weeks of training ($P = 0,025$; $ES = 1,36$), while there were no differences between the two groups after 16 weeks ($P = 0,442$).

Conclusions. Our findings indicate that EMS has a positive effect on isometric strength of young athletes, but the effect is very similar to the effect of isometric voluntary training. Moreover, EMS affects the early explosive force development (< 50 ms) and also has influence on muscle tone in experimental and contralateral leg.

Key words: maximal voluntary isometric contraction, the rate of force development, tensiomyography, contralateral effect, young athletes.

VPLIV ELEKTRO MIŠIČNE STIMULACIJE NA KONTRAKTILNE LASTNOSTI MIŠIČ

Izhodišča. Dandanes se že pri mladih športnikih pojavlja jasna težnja k hitrejši izvedbi in gibanju ter raven zmogljivosti športnika se nenehno dviguje. Pri mladih športnikih, kjer se večino časa porabi za specifičen trening in zmanjkuje časa za treninge največje hitrosti, moči in eksplozivnosti bi bilo za pričakovati uporabo novih trenažnih metod med katerimi je tudi elektro mišična stimulacija (EMS). Zato je bil cilj naše raziskave ugotoviti vpliv 8

tedenskega treninga EMS nedominantne noge na kontraktilne lastnosti m. vastus lateralis, m. vastus medialis ter m. biceps femoris mladih športnic. Poleg začetnih in 8-tedenskih meritev nas je zanimal še zadržan učinek po 8 tednih brez EMS. Cilj je bil tudi raziskati vpliv EMS nedominantne noge na kontralateralni transfer.

Metode. V študijo je bilo vključenih 19 mlajših športnic, starih od 15 do 18 let (v povprečju $16,4 \pm 0,9$ let). Preiskovanke smo naključno razdelili v kontrolno ($N = 8$) in eksperimentalno skupino ($N = 11$). Kontrolna skupina je prvih osem tednov izvajala vajo enonožni dvig bokov z nedominantno nogo, medtem ko je eksperimentalna skupina izvajala trening EMS m. vastus medialis, m. vastus lateralis in m. biceps femoris (nedominantne noge). Za EMS smo uporabljali prenosne elektrostimulatorje Cefar Rehab x2, CefarCompex Scandinavia AB, Švedska, Compex mi Sport in Compex SP 4.0., Compex®, Švica. Obe skupini sta izvajali treninga 3 x tedensko. Trening EMS je zajemal 36 mišičnih krčenj pri frekvenci 100 Hz, dolžini impulza 400 μ s, dvigu stimulacije 1 s, 3 s mišičnim krčenjem in 0,5 s spustom stimulacije. Odmor je trajal 17 s z impulzi 8 Hz. Preiskovanke smo testirali na začetku, po osmih tednih treninga (8 teden) in osem tednov po končani intervenciji (16 teden). Testiranje je zajemalo merjenje največje izometrične silovitosti in hitrost prirastka sile mišic iztegovalk in upogibalk kolena s kolenskim dinamometrom ter merjenje tenziomiografskih odzivov mišic z merilnikom tenziomiografije.

Rezultati. Ugotovili smo, da se je največja izometrična silovitost povečala le pri iztegovalkah kolena nedominantne noge po 8-tedenski vadbi ($P = 0,085$; $ES = 0,87$), a razlika ni bila več prisotna na ponovnih merjenjih, 8 tednov po zaključku EMS ($P = 0,184$). Največja hitrost prirastka sile v prvih 50 ms iztegovalk kolena nedominantne noge se je po 8 tednih vadbe z EMS povečala ($P = 0,049$; $ES = 0,85$) in ostala nekoliko povečana tudi 8 tednov po zaključku treninga EMS ($P = 0,090$, $ES = 2,17$). Medtem ko obstaja interakcija čas * skupina v amplitudi odziva tenziomiograma m. vastus medialis ($P = 0,044$), s post hoc testi nismo mogli potrditi razlik med skupinama po 8 tednih ($P = 0,602$) in 16 tednih ($P = 0,655$) intervencije. Kontralateralni transfer smo potrdili le pri parametru največje amplitude tenziomiograma m. vastus medialis ($P = 0,001$; $ES = 1,36$). S post hoc analizo smo dokazali razlike med skupinama po 8 tednih treninga ($P = 0,025$; $ES = 1,36$), medtem, ko nismo našli razlik med skupinama po 16 tednih ($P = 0,442$).

Zaključek. Slednje ugotovitve kažejo na to, da EMS pozitivno vpliva na izometrično moč mlajših športnic, vendar ima podoben učinek kot izometrični hoten trening. Poleg tega vpliva tudi na hitro moč v zgodnjih sekcijah časa (< 50 ms) in na mišični tonus kontralateralne noge.

Ključne besede: mišična silovitost, hitrost prirastka sile, tenziomiografija, kontralateralni transfer, mladi športniki.

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THE EFFECT OF MORPHOLOGICAL CHARACTERISTICS, MOTOR ABILITIES AND TECHNIQUE IN THE FREE AND COMPETITIVE ALPINE SKIING ON COMPETITION PERFORMANCE FOR BOYS AGED 12 TO 14

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Introduction. Alpine skiers are subjected to recurring medium to high-intensity motor tasks in their training or competitions. Their success is based on their ability to tolerate fast, repetitive high-energy skiing activities. Physiological profiles in aerobic - anaerobic loads on the snow previously measured in many studies have shown a high degree of connection with competitive successes in alpine skiing.

Alpine skiing technique, which is also included in the measurements is ability to maintain cutting-edge technology and suitable ground-based pressure to minimize losses and maximize speed at all sections of the skiing tracks.

A good balance is the “*conditio sine qua non*” (indispensable condition) in top alpine skiing. In alpine skiing it is primarily efficient to control the speed and direction of skiing, which can be achieved in various ways. In practice we are talking about slips in turns (most often expressing a poor technique) and guiding curves on the edges of the skis with good grip on the snow or good support on the snow surface.

Methods. The purpose of this study was to use a regression analysis to determine the independent effect of selected morphological characteristics, motor abilities and technique in free and competitive alpine skiing on performance in boys aged 12 to 14 years. The research was carried out on the basis of a sample of twenty categorized competitors from various Slovenian ski clubs. We used reduced models of variables of morphological characteristics - MC (left knee volume, body mass index (BMI), % body fat), motor abilities - MA (ten jumps on both legs, runing eights, stability test), technique

in free skiing - TEHFSK (balance, Co-ordination of the movement and the derivation of turns) and the technique of competitive skiing - TEHCSK (balance, derivation of the curve and the lines of skiing). The variables we have identified have shown a high degree of correlation with the performance in alpine skiing in previous research. For the criterion variable, we use the total number of points won in the Slovenian Cup in the season 2013/14.

Results. We established the link between the effects of individual sets of variables with competitive performance in the level of risk $p < 0,05$. The results showed that all four measurement areas explain 85.4% of the variance of the points won ($R^2 = .854$), so the effect of the reduced predictors used for the level of the performance in the competitive alpine skiing in boys is very high. We can see that the results of morphological characteristics ($p < .034$) and motor abilities ($p < .001$) in boys statistically explain the percentage of points won in Slovenian Cup. The regression coefficient ($\beta = 0.531$) shows that boys with better mobility and better morphological characteristics ($\beta = 0.220$) have a higher score in a cup competition than peers with lower values of these two independent variables. With a small number of measurements ($N = 20$), it was not too surprising that the effect of TEHFSK ($\beta = 0,196$) and TEHCSK ($\beta = 0,223$) on performance in competitive skiing is not sufficiently pronounced.

Conclusion. The results of the research indicate a greater emphasis in the technique practice in boys category U14. Research and knowledge in the children's racing alpine skiing programs are a necessity and can greatly contribute to improve training programs, the innovative approach of trainers and can consequently bring the less-defensive and more motivated childrens to practice this beautiful winter sport.

Key words: alpine skiing, body measurements, motor capacities, technique

UČINEK MORFOLOŠKIH LASTNOSTI, GIBALNIH SPOSOBNOSTI TER TEHNIKE V PROSTEM IN TEKMOVALNEM ALPSKEM SMUČANJU NA TEKMOVALNO USPEŠNOST ZA DEČKE STARE OD 12 DO 14 LET

Izhodišča. Alpski smučarji so v svojih trenajžnih ali tekmovalnih nastopih podvrženi ponavljajočim se srednje do visoko intenzivnim gibalnim nalogam. Njihov uspeh največkrat bazira na njihovih sposobnostih prenašati hitre ponavljajoče se visoko energetske smučarske akcije. Fiziološki profili v aerobno – anaerobnih obremenitvah na snegu, ki so bili predhodno v več raziskavah že merjeni so pokazali veliko stopnjo povezanosti s tekmovalnimi uspehi v alpskem smučanju. Tehniko alpskega smučanja, ki je prav tako vključena v meritve lahko vrednotimo preko primernih pritiskov na podlago, s čimer uravnavamo minimalne izgube in maksimalno pridobivanje hitrosti na vseh odsekih prog. Dobro ravnotežje je "conditio sine qua non" (nepogrešljiv pogoj) v vrhunskem alpskem smučanju. V alpskem smučanju gre predvsem za učinkovit nadzor hitrosti in smeri smučanja, kar lahko dosežemo na različne načine. V praksi govorimo o zdrsih v zavojih (kar največkrat izraža pomanjkljivo ali slabo tehniko) in vodenje zavojev po robnikih z dobrim oprijemom smuči na snežni podlagi - iskanje dobre opore na snežni površini.

Metode. Namen te študije je bil uporabiti regresijsko analizo za ugotavljanje neodvisnega učinka izbranih morfoloških lastnosti, gibalnih sposobnosti in tehnike v prostem in tekmovalnem alpskem smučanju na uspešnost pri dečkih starih od 12 do 14 let. Raziskava je bila izvedena na podlagi vzorca dvajsetih kategoriziranih tekmovalcev iz različnih slovenskih smučarskih klubov. Uporabili smo reducirane modele spremenljivk morfoloških lastnosti - ML (obseg levega kolena, indeks telesne mase (BMI), % telesne maščobe), gibalnih sposobnosti - GS (sonožni deseteroskok, tek osmic, indeks stabilnosti), tehnike v prostem smučanju - TEHPR (uravnoveženost, koordinacija gibanja in izpeljave zavojev) in tehnike tekmovalnega smučanja - TEHTEK (uravnoveženost, izpeljave zavojev in linije smučanja). Spremenljivke, ki smo jih določili so v predhodnih raziskavah izkazovale visoko stopno povezanosti z uspešnostjo v alpskem smučanju. Za kriterijsko spremenljivko smo uporabili osvojeno skupno število točk v slovenskem pokalu v sezoni 2013/14.

Rezultati. Povezanost učinka posameznih sklopov spremenljivk s tekmovalno uspešnostjo smo ugotavljali na nivoju tveganja $p < 0,05$. Rezultati so pokazali, da vsa štiri področja merjenja pojasnjujejo 85,4% variance osvo-

jenih točk ($R^2 = .854$), zato je učinek uporabljenih reduciranih spremenljivk na uspešnost v tekmovalnem alpskem smučanju pri dečkih zelo visok. Iz rezultatov lahko razberemo, da rezultati morfoloških lastnosti ($p < .034$) in gibalnih sposobnosti ($p < .001$) pri dečkih statistično značilno pojasnjujejo delež osvojenih točk. Regresijski koeficient ($\beta = 0,531$) kaže, da imajo dečki z boljšimi gibalnimi sposobnostmi in boljšimi morfološkimi lastnostmi ($\beta = 0,220$) višji zbir točk v pokalnem tekmovanju od vrstnikov z nižjimi vrednostmi omenjenih dveh neodvisnih spremenljivk. Ob majhnem številu merjencev ($N=20$) nas ni preveč presenetilo, da učinek TEHPR ($\beta = 0,196$) in TEHTEK ($\beta = 0,223$) na uspešnost v tekmovalnem smučanju ni dovolj izrazit.

Zaključek. Rezultati raziskave nakazujejo na večji poudarek v vadbi tehnike pri dečkih kategorije U14. Sicer pa so raziskave in dognanja v otroškem tekmovalnem alpskem smučanju nuja in lahko veliko pripomorejo k izboljšanim programom vadbe, inovativnim pristopom trenerjev ter posledično manj poškodovanim in bolj motiviranim otrokom za vadbo tega lepega zimskega športa.

Ključne besede: alpsko smučanje, telesne izmere, gibalne kapacitete, tehnika

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PHYSICAL EDUCATION IN CHILDREN WITH AUTISM

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Introduction. Physical education class (PE) is very important for achieving daily physical activity (PA) recommendations in children. Although there are some studies reporting PA phenotypes during PE in children, there is no data for children with autism. Therefore we aimed to assess the quantity and intensity of PA in children with Autism during a PE. Furthermore, we compared their moderate to vigorous intensity of PA (MVPA) with their healthy counterparts. Further, we developed and validated didactic adjustment of a PE to achieve at least 50% of MVPA during PE.

Methods. The study included 12 children with Autism, 8 boys and 4 girls, who were 5 to 9 years of age. Five children suffer from a mild version (Asperger syndrome), while the other 7 suffer from a more severe form of Autism. They are all pupils of the Coastal Primary School for Children with Special Needs. We measured the quantity and intensity of their PA by using electronic measuring devices – accelerometers, which the children carried attached to their right hip during total six PE classes.

Results. We found that children with Autism spent 20.5 ± 5.2 minutes in MVPA, which is $41.7 \pm 6.8\%$ of the entire class. This value does not differ from the one achieved by children without autism, which is $37.2 \pm 6.8\%$ ($P = 0.121$). Using didactic adjustment of PE we increased time spent in MVPA from 17.5 ± 4.2 minutes ($45 \pm 11.8\%$) to 22.5 ± 5 minutes ($50.9 \pm 11.5\%$) ($P=0.009$). We noticed no gender differences in MVPA, neither before ($P = 0.276$) or after the adjustment ($P = 0.117$). We also noticed no differences in MVPA between autism degree, neither before ($P = 0.322$) or after the adjustment ($P = 0.121$).

Conclusions. We can conclude that MVPA does not differ between healthy and autistic children and that the didactic adjustment of PE increases

the time spent in MVPA in children with autism, regardless of their gender and the degree of Autism.

Key words: children, autism, Asperger Syndrome, gym class, measuring devices.

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MOTOR SKILLS OF SELECTED AND NON-SELECTED PRESCHOOL CHILDREN IN ARTISTIC GYMNASTIC

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Introduction. Motor skills developed in pre-school and primary school children are the basis for later different sport-specific abilities and movement (Clark, 1994). Main goal of this paper is to found differences in motor skills between selected and non-selected group of children.

Methods. Thirty-one child participated in this study (age 5.59 ± 0.77). They were enrolled in training of artistic gymnastics. The data was collected through battery of tests for motor skill assessment „The Test of Gross Motor Development – Second Edition” (TGMD-2)(Urlich, 2000). Analysis of variance (one-way ANOVA) and Bonferroni post-hoc test was conducted to determine main differences between the selected and non-selected group of children gymnasts.

Results. The main results of this study show that there is a numerical but not statistically significant difference between the selected and non-selected in gross motor index ($S = 91.0$, $NS = 85.3$) and manipulative skills ($S = 7.0$, $NS = 6.4$), while the difference in locomotor knowledge is significant ($S = 9.9$, $NS = 8.6$, $p < 0.05$).

Conclusions. The work in sports clubs is often not accompanied by age-appropriate multilateral program and overall development of a child or young athlete. The training system sometimes favors early specialization and in the younger age groups consists of one sport specific programs (Šalaj, Krmpotić& Stamenković, 2016). In artistic gymnastics, almost no special manipulative requirements are needed. A child's gymnastics requires a high level of body coordination in order to achieve the desired results. Coaches select children seeking a higher level of locomotor skill, while manipulative skill are neglected in testing as well as in training. This can lead to specialized development of children too early. For pre-school children, it is crucial

to develop all basic motor skills to provide conditions for future sports and physical activity (Stodden et al., 2008). Manipulative skills of gymnasts are less developed and they need to be trained to achieve a more complete development of the child, possible future top level athlete.

Key words: motor development, sport, early specialization

Acknowledgements: Abstract presents a work from a research project “Motor skills of preschool children” [UIP - 2014-09-5428] funded by the Croatian Science Foundation.

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QUALITATIVE EVALUATION OF AN ORGANIZATIONAL DEVELOPMENT INTERVENTION TO INCREASE CAPABILITIES FOR PHYSICAL ACTIVITY IN CHILDCARE CENTERS: FIRST RESULTS

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Introduction. Physical activity affects children's health as well as their development. Physical activity promotion can be seen as a central challenge for quality improvement in childcare centers. Childcare centers should offer an environment and structures that allow children to be physically active. More rigorous implementation of physical activity promotion through certification processes ensuring standardized quality criteria in various areas (e.g. safety) stands to have a positive effect on the overall quality of childcare centers.

The project QueB, which is part of the joint transdisciplinary research project Capital4Health – Capabilities for active lifestyles –, is located in a childcare center setting (n=12 centers in two model regions in Bavaria, Germany) and it promotes the co-production of physical activity through an interactive knowledge-to-action approach. Specifically, QueB focuses on changing social practices among staff (n=163) and children (n= 1035) via a participatory organizational development process that includes an innovative quality certification.

Methods. The effectiveness, acceptability and feasibility of the intervention were assessed via questionnaire. One key person of each participating childcare center completed a process evaluation on supporting forces, barriers and self-reported capabilities for physical activity. Surveys took place

three months after the start of the intervention and 12 months after the start of the intervention. We used semi-structured in-depth interviews to analyze the causes of different developments in the childcare centers.

In addition, we developed a self-assessment tool (“childcare-center-check-app”) which the childcare centers’ staff used to map and promote capabilities for physical activity.

Results. Preliminary analyses show that all 12 key persons reported first changes in the childcare centers around three months after the start of the intervention. The most often reported barriers were those concerning the framework conditions, including the spatial situation, the financial resources, shortage of time and shortage of personnel. The main supporting force were the parents. The childcare-center-check-app helped to sensitize the teams to the topic of a physically active childcare center (agree strongly: 57%, agree: 43%) and to identify gaps that can be addressed (agree strongly: 29%, agree: 57%, agree partially: 14%). We will present further and more detailed outcomes at the conference.

Conclusions. Preliminary findings indicate that educational staff considers framework conditions to strongly influence their possibilities to initiate changes and thus impede organizational development. On the other hand, they have been able to make first changes in their childcare centers. These findings suggest that it is important for childcare interventions to empower the educational staff (also by just getting in touch and using a technical device/app) and increase their awareness of their own capabilities. We expect the participatory organizational development process to result in sustainable changes in childcare centers.

Key words: capabilities for physical activity promotion, childcare centers, empowerment, assessment, evaluation

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NUTRITIONAL STRATEGIES OF SLOVENIAN ELITE YOUNG SWIMMERS VERSUS SPORTS NUTRITION RECOMMENDATIONS

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Background. Young athletes are significantly different in major physiological, metabolic and biomechanical aspects, than both, their less active peers as well as adults. This has substantial impact on their energy and nutritional requirements. Adequate nutrition strategy in young athlete provides sufficient energy and nutrient intake in adolescence, critical for normal growth and development, maintaining health and injury prevention. An adequate nutrition intake also enables optimization of the training process and successful recovery. Adolescence is a crucial period, comprised of intense growth and development, involving the alteration of body composition, metabolic and hormonal fluctuations, maturation of organ systems and formation of nutrient storage, all of this having potential impact on the individual's health in the future.

Methods. In the sample of 19 elite young swimmers, the dietary intake from 3-day food diaries was assessed. By analysing data obtained from the questionnaire we determined some health parameters, nutrition habits, timing of meal intake, use of supplements and sport foods, as well as type, intensity and the duration of exercise. Anthropometric and bioimpedance values were used for calculation of nutritional values according to sports dietetics recommendation. The data were processed in Microsoft Excel and SPSS 21.0 (descriptive statistics, one sample T-test, independent samples T-test, Spearman's rank coefficient and Eta correlation ratio).

Results. Energy availability in some of the young male swimmers and in majority of young female swimmers was too low. Carbohydrate intake depending on the type, duration and intensity of exercise was found to be adequate in boys and two thirds of the girls. Despite the fact that the average protein intake even exceeded the upper recommended limit, some girls did not meet the lower recommended intake limit. Total fat intake was lower

than lower recommended level, whereas saturated fat intake was found to be on the upper recommended level. Calcium and iron intake in boys exceeded recommended values, while girls mostly demonstrated lower calcium intake than recommended and some had lower iron intake, too. Meal timing was adequate in majority of young swimmers, who often reached for nutrition supplements, most commonly used being omega 3 fatty acids, multivitamins and magnesium.

Conclusions. First systematic comparison of applied nutrition strategies with current recommendations of sports nutrition in young Slovenian elite swimmers enabled us to identify dietary deficits that can either compromise health condition or lead to decline of the sports results achieved. Acquired information can enable dietitians to prepare more successful, personalised nutrition strategies for young elite swimmers, hence contribute to the preservation of their health and development into top performers.

Key words: nutrition, young athlete, recommendations, health, performance

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SKELETAL MUSCLE CONTRACTILE PROPERTIES IN CHILDREN: AN OVERVIEW

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Introduction. Skeletal muscle is indispensable for locomotion, maintenance of body posture and health. Muscles have to produce power, by generating force and shortening at the same time where fast fibres can generate about three times as much power as slow fibers and that is largely attributable to their 3-times higher maximal shortening velocity. The speed of muscle contraction is largely determined by fibre type composition. While there are numerous data on the muscle fibre type composition in adults, we are aware of only seven studies in children. Vast majority of studies reported data from the vastus lateralis (VL) muscle, where other muscles are as important in childhood for coherent posture, coordinated motor development, sport performance and health. One of the main causes of the lack of information on changes in fibre type composition during maturational growth is related to the fact that this information is usually obtained from invasively obtained skeletal muscle biopsy samples. Such samples are difficult to obtain from healthy children due to ethical issues. These considerations were among the main reasons to develop tensiomyography (TMG), a non-invasive approach to measure skeletal muscle contractile parameters that indeed appeared to predict 87% of the variance of the proportion of type I myosin heavy chain in the VL of adults, where the contraction time (Tc) alone accounted for 77% of the variance.

Methods. We joined findings of all published articles reporting children TMG data (see literature). First study involved 107 9-year old children (49% boys) that were followed on a yearly basis to the age of 14 years. Furthermore, second study included 81 athletes - rhythmic and sport gymnasts (32% boys) of average age 15.4 years. TMG was assessed in 5 muscles where we present data in two: VL, and biceps femoris (BF). A sub-sample of children from the first study were classified in athletes (N=56; member of sport clubs

with regular weekly out of school exercise) and non-athletes (N=34; not a members of sport clubs and without regular weekly out of school exercise).

Results. First study confirmed main effects of age ($P<.001$), muscle ($P<.001$), muscle x sex ($P<.001$), age x sport ($P=.024$; $\eta^2=.030$), and muscle x age ($P<.001$) interactions on Tc. This was reflected by a longer Tc in the VL in boys than girls and a shorter Tc in the BF of boys than girls. Post-hoc analysis revealed that the Tc decreased between 9 and 10 years in the VL, and increased in the BF after the age of 10 years. Sport participation had no effect on VL but affected BF after the age of 12 years, where athletes had shorter Tc than non-athletes. Tc of VL show no correlation with sprint velocity while Tc of BF correlated negatively only in boys after the age of 11 years (r ranged -.18 to -.43). Second study confirmed shorter Tc in VL and BF than in pooled athletes from first study, however, authors reported positive correlation of VL and BF with age (r ranged .36 to .54).

Discussion. Using TMG we found that pre- and early-pubertal boys had in general slower muscles than girls. During early maturation in the VL there is a slow-to-fast transition between at least the age of 6 and 10 years, that then appears to stabilize to adult proportions. Regular participation in sport was associated with a faster BF but not VL. TMG data thus represent a non-invasive, although indirect, indication of the developmental trends in changes in muscle fiber type composition in children.

Key words: TMG, Tensiomyography, Contraction time, Muscle composition, MHC

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KINESIOLOGISTS AS THE KEY FACTOR FOR PROMOTING HEALTHY LIFESTYLE AND THEIR INFLUENCE ON GENERAL POPULATION'S INVOLVEMENT IN SPORT AND PHYSICAL ACTIVITIES WHICH ARE BENEFICIAL FOR HEATH

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Physical activity is the essential model of health prevention and improvement. That is the fact accepted in many ministries of health of the EU countries together with the European Commission. The way of living is the main cause of premature death according to the recent studies. Physical inactivity leads towards high blood pressure, high blood glucose, overweight and obesity, high cholesterol etc. In Croatia, the yearly, budget for health care is 22.1 billion Kuna which can be significantly reduced by promotion of the importance of physical activity from the early age.

There are many studies, which show the connection of physical activity and better brainwork and according to that, the better success in school of the elementary and high school pupils. US Department of Health and Human Services, for the purpose of the study increased the number of physical education classes in schools and increased the offer of elective extracurricular physical activities. The results showed that physical activity could have the key role in the development of brain and all together cognitive abilities and school success.

Main role of all faculties of kinesiology is to produce the quality professionals for work in the obligatory physical education classes and extracurricular activities in elementary and high schools and in higher education. The finished masters o kinesiology have the main role to care for the positive influence on the health of the entire population, promotion of the regular physical activity and creation of the habit for everyday physical activity. The important role of kinesiologists is also the close collaboration with medical

doctors together with education of the wide population about the importance of physical activity.

The main goals and some of the ways to increase awareness of the importance of physical activity are: curriculum of the physical education classes should be present in the whole educational vertical; increase of the number of hours of physical education classes in schools; work of kinesiologists with children 1st till 4th grade elementary school; introduction of contents which can be lead only by kinesiologists in the pre-school education; obligations for work of kinesiologists in realisation of basic programmes in sports associations (universal sports schools etc.).

For achieving all that is above mentioned, the interdisciplinary approach is needed, which includes good organisation, facilities, educated professionals, equipment, political, social and financial support.

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INFLUENCE OF SOCIAL INTERACTION IN A GROUP ON THE PHYSICAL PERFORMANCE OF CHILDREN

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In youth sport, it is assumed that there are many factors influencing sport performance of children. This research is designed to find out whether there are any differences between individual and group performance. This study is to prove social interaction, i.e. mutual encouragement in a group of children, influences significantly their sport performance, meanwhile a child's self-motivation in individual discipline is not sufficient to achieve better performance. The aim of study was to report on the effect of social-comparative feedback on the physical performance of children between the ages of nine and twelve years. The study involved young elite synchronized swimmers from Czech Olympic club who compete at an international level ($n=28$, age 10.12 ± 1.20) in an experimental design. The swimmers were required to hold a wall seat position for as long as possible in two separate measured rounds, i.e. as individuals and as a group. The girls were randomly split into two groups, one started with an individual and the other started with a group wall seat position. Five girls didn't finish session. Between the two measured rounds, there was a week interval. Each time, measured duration was recorded. The mean performance in individual was 108.82 ± 57.10 and in group 271.50 ± 218.88 . The data were subjected to an unrelated t-test; the result was $t=2.0639$ and it was proved to be significant ($P<0.005$). It showed mutual social encouragement in a group caused greater improvement in performing a wall seat position. To sum up, we proved social interaction, i.e. mutual encouragement in a group of children, influenced significantly their sport performance. However, it was also found out such social interaction/encouragement is not consistent for every child and in every situation. Children in individual discipline did not achieve better performance due to lack of 'team spirit' and their self-motivation was proved not sufficient. Another very important factor influencing a child's self-motivation is positive verbal motivation, positive constructive feedback, and appraisal. Additionally, seven-

ral ways in which the experimental conditions could be improved to standardize the results further and make them more applicable to a clinical setting were discussed during this research.

Ethics: consent forms were signed by parents before it started.

Key words: self-motivation, verbal motivation, constructive feedback, appraisal, mutual encouragement, wall seat position.

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THE RESEARCH OF DIFFERENCES IN MOTOR ABILITIES BETWEEN POTENTIALLY MOTOR GIFTED GIRLS AND BOYS

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The quality of the process of identifying motor gifted children in the framework of physical education (PE) depends on the recognition of their abilities, interests, gender, etc. Unfortunately, there is insufficient research on the implications of gender differences in the identification of motor giftedness within PE. This research aims at the problem of the possibility to identify differences in motor abilities between potentially motor gifted boys and girls within the range of PE by the techniques of motor testing. The research has been conducted on a sample of 630 primary school children aged 10 from Vrsac. The motor abilities of the children have been assessed by a battery of 13 motor tasks. Each individual score has been positioned by the standardised Z-value. A subsample of 63 potentially motor gifted children (35 boys and 28 girls) with the score above 90 percentile range has been formed. The differences in motor abilities were analyzed by using the T-test for small independent samples. The statistically significant level was set up at $p < 0.05$. The results have showed that there were significant differences between potentially motor gifted boys and girls in the following motor variables, favoring the boys: Standing Broad Jump, Bent-arm hang, Sit-Ups in 20 seconds, Flamingo Balance test, Targeting, 10 x 5m Shuttle Run, Obstacle course backwards, 15m run, 20m endurance Shuttle Run. However, no significant differences between potentially motor gifted boys and girls were identified in the following motor variables: Rhythmic jumping, Arm plate tapping, Standing on one leg on a bench (Balance test), Sit and Reach. In addition to that, there were no significant differences in favour of the potentially motor gifted girls in any of the motor variables. According to the results which show that the potentially motor gifted boys were more successful than potentially gifted girls in most of the motor tasks it is justified and even preferred to test the boys and girls separately when identifying motor gifted children (using the techniques of motor testing). The results from this research can serve as

a basis for a reliable identification of motor gifted children and further work with them in the range of PE, extra-curriculum activities and special school programmes for the gifted in sport.

Key words: gender differences, giftedness, identification, motor testing

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UNLOCKING BICYCLE TRANSPORT FOR CZECH PRIMARY SCHOOL CHILDREN. A CASE STUDY OF A MULTI-FACETED COMMUNITY PROJECT

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Introduction. Demand for active transport has recently put bicycling to school into the spotlight. It is considered to be an effective way to increasing children's physical activity levels. The Ride2school project enables children to bicycle to Olomouc elementary schools by providing college student-guided bike rides for small groups.

Methods. A pilot study conducted in 2014 involved 77 responders. Interviews, focus groups, and observation were the methods of data collection. In the consequent 2016 case study, 9 elementary school children and 26 guides recruited from Palacký University Olomouc students.

Results. The participants completed 179 rides to and from school, totalling 561.5 ridden kilometres. The children, guides, and parents were interviewed over the course of the project and at a bike camp concluding the season. The findings of qualitative thematic analysis revealed the Palacký University's contribution to local community life, the interaction among the schoolchildren, college students, parents, and policy makers, and a shift in perception of feasibility of cycling to school across the groups as three main benefits.

Conclusions. Main challenges included college students mostly out of town in June and September and limited possibilities to help them extend their stay. Policies promoting active mobility should seek to unlock the potential of creative interaction between elementary and higher education institutions.

PSYCHOPHYSIOLOGICAL RESPONSES WHILE PLAYING TENNIS ON VIRTUAL AND REAL ENVIRONMENT IN CHILDREN AGED 7 – 12 YEARS

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Background. Virtual reality is a computer and video games – generated simulation of a real life environment or situation. With the use of active video games, the simulation is based on details and features representing the key elements and specificities of each sport. The new video games generation introduced controllers and motion sensing input devices that require players physical interaction, which is not only based on hand-eye coordination, but instead whole body movements are involved. Tracking full-body movements in three dimensions, measuring reaction time, acceleration and by detecting the speed of a player's movement, those games represent the most authentic replication of real experiences from an interactive system. It has been proved that playing active video games compared to resting increase heart rate, oxygen consumption (VO₂) and energy expenditure, has the ability to encourage and measure emotional changes, cognitive and motivational processes in both children and adolescents, as well as in the elderly. Since previous studies did not compare virtual environments with sports activities in the real ones, we aimed to measure psychophysiological body responses, after an acute exposure to a real life tennis game and his virtual replication.

Methods. We used NeXus-10 MKII to assess electrocardiography (ECG), breathing frequency (BF), skin conductance (SC) and skin temperature (ST) on twenty children while playing a real tennis game and his virtual replication (Grand Slam Tennis Wii 2). In addition an accelerometer was used to monitor their locomotor activity (amount of movement). A paired sample t-test was used to compare the real and virtual environment. Statistical significance was accepted at $p < .05$.

Results. Our preliminary results showed significant difference in psychophysiological body responses between the two environments. Electrocardiography (ECG), breathing frequency (BF), skin conductance (SC) and skin temperature (ST) were all significantly higher in the virtual environment compared to the real one.

Conclusions. Significantly higher levels of psychophysiological body responses were reached while playing virtual tennis. Detailed results will be further presented at the conference.

Key words: alternative training, motivation, cognitive stimulation.

PSIHOFIZIOLOŠKI ODZIVI OTROK STARIH 7 DO 12 LET MED IGRANJEM TENISA V VIRTUALNEM IN REALNEM OKOLJU

Izhodišča. Virtualna resničnost je oblika računalniške simulacije, preko katere lahko uporabnik vidi, sliši in občuti okolje, kot da bi bil v njem resnično prisoten. S pomočjo aktivnih video iger, simulacija temelji na podrobnosti in značilnosti, ki predstavljajo ključne elemente in posebnosti posamezne športne zvrsti. Nova generacija video iger zahteva fizično interakcijo igralcev, ki ne temelji le na koordinaciji roka – oko, temveč na celotno telo. Zaznavanje gibanja v tridimenzionalnem prostoru, meritve reakcijskega časa in pospeška ter percepcija igralčeve hitrosti omogočajo tovrstnim igram najbolj pristno preslikavo realnih doživetij s strani interaktivnih sistemov. Dokazano v primerjavi z mirovanjem, igranje aktivnih video iger zviša srčni utrip, poveča porabo kisika (VO₂) ter porabo energije, vsebuje sposobnosti spodbujanja in meritve čustvenih sprememb, kognitivnih sposobnosti in motivacijskih procesov tako pri otrocih in mladostnikih, kot tudi pri starejših osebah. Ker dosedanje raziskave niso primerjale virtualnega okolja s športnimi aktivnostmi v realnem okolju, smo v naši študiji merili psihofiziološke odzive telesa po akutni izpostavljenosti igranju tenisa v realnem in virtualnem okolju.

Metode. Z uporabo naprave NeXus-10 MKII (Mindmedia, Nizozemska), smo dvajsetim otrokom izmerili frekvenco in variabilnost srčnega utripa in dihanja, temperaturo in galvansko prevodnost kože med igranjem tenisa tako v realnem (teniško igrišče) kot virtualnem okolju (Grand Slam Tennis

Wii 2, EA Canada). Med izvedbo udarcev smo spremljali njihovo gibalno aktivnost (količino gibanja) s pomočjo merilnika pospeška. Razlike med okolji smo merili z t-testom odvisnih vzorcev, hipoteze so bile sprejete pri stopnji tveganja $p < .05$.

Rezultati. Preliminarni rezultati so pokazali, da je med igranjem tenisa v realnem in virtualnem okolju prišlo do pomembnih razlik v psihofizioloških odzivih telesa. Izmerjene frekvenca srčnega utripa, frekvenca dihanja, temperatura in prevodnost kože so bili pomembno višji v virtualnem okolju v primerjavi z realnim.

Zaključek. Pomembno višje vrednosti fizioloških odzivov telesa, so otroci dosegli med igranjem tenisa v virtualnem okolju. Rezultati bodo podrobneje predstavljeni na konferenci.

Ključne besede: alternativni trening, motivacija, kognitivna stimulacija.

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INFLUENCE OF ATHLETIC IDENTITY ON SELF-CONCEPT BASED ON STUDY OF DISABLED SKIERS

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Introduction. Athletic identity is the degree to which an individual identifies with the athlete's role and looks to others for acknowledgement of that role. It is a type of self-schema or how individuals perceive themselves. By participating in a sport, individuals are making a social statement about who they are and how they want others to regard them. Athletic identity is developed through the acquisition of skills, confidence, and social interaction during sport. It plays a part in both the cognitive and social roles. How we experience and perceive ourselves and how we believe others perceive us is the essence of self-concept. By experiencing oneself, each of us expresses his/her compliance with social norms and the social environment. With an acute injury the established balance of self-concept and socialization is disturbed; once the mourning phases are completed, the balance slowly starts to restore itself. The aim of our study was to determine how athletic identity influences self-concept among disabled skiers with acquired disability.

Methods. The survey was carried out among the Sochi Paralympic games participants. There were 129 respondents, who all had an acquired physical disability and were competing in alpine skiing. We used a questionnaire that consisted of twenty-four statements about athletic identity. The respondents evaluated each of the statements with a scale of 1-5, where 1 means I completely disagree and 5 means I completely agree. To ascertain the respondents' self-concept, the Tennessee Self-Concept Scale was used. Simultaneously, we examined the stratification information about the respondents. We used regression analysis and Pearson's correlation coefficient to analyse the data.

Results. There were no differences in skiers' self-concept regarding different disabilities, gender or home country. There were no differences in athletic identity depending on the expected ranking in competition. The athletic identity explains 5.0 % of the variability of self-concept. The regression

model is statistically significant ($F = 6.676$, $\alpha = 0.011$). Athletic identity has a statistically significant impact ($\text{sig}=0,011$; $\alpha < 0.05$) on self-concept. The regression equation can be written as $\text{self-concept} = 0.127 + 0.208 * \text{athletic identity}$. We have found that an athletic identity has got statistically significant positive effect on self-concept. The higher athletic identity disabled athletes have, the higher they evaluate their self-concept.

Conclusion. Engaging in disabled sport plays a major role in athletic identity which influences self-concept, the social identity, subjective quality of life, social interactions, process of rehabilitation and physical capacity, such as strength, skills, balance, etc. To build a higher self-concept and increase the percentage of the persons with disabilities who do sports, we suggest involvement in sport activities already in the final stages of the rehabilitation process.

Key words: sport identity, self-concept, alpine skiing, disabled skiers

VPLIV ŠPORTNE IDENTITETE NA SAMOPODOBO NA PRIMERU SMUČARJEV INVALIDOV

Izhodišča. Športna identiteta je stopnja, do katere se posameznik identificira z vlogo športnika in hkrati išče potrditev te vloge v svojem družbenem okolju. Je tip samo percepcije ali kako posameznik doživlja samega sebe. Z udejstvovanjem v športu posamezniki vzpostavljajo socialne vloge, kdo želijo biti in kako želijo, da jih drugi dojemajo. Športna identiteta se razvija skozi pridobivanje spretnosti, samozavesti in socialnih interakcij v športu. Igra pomembno vlogo tako na kognitivnem kot socialnem področju. Samopodoba je doživljanje sebe, predstava kako se vidimo in kako mislimo, da nas vidijo drugi. Preko doživljanja sebe vsak izmed nas izraža svojo skladnost s socialnimi normami in družbenim okoljem. Ob akutni poškodbi se poruši ravnotežje, ki je bilo vzpostavljeno in po zaključenih fazah žalovanja, se le-to začne počasi ponovno vzpostavljati. Namen naše raziskave je bil ugotoviti, ali stopnja športne identitete vpliva na samopodobo smučarjev invalidov s pridobljeno poškodbo.

Metode. Raziskava je bila izvedena med udeleženci Paraolimpijskih iger v Sočiju. V anketi smo zajeli 129 smučarjev invalidov, vsi so imeli pridobljeno invalidnost. Za preverjanje športne identitete smo uporabili vprašalnik s 24 trditvami o športni identiteti. Anketiranci so posamezne izjave vrednotili na lestvici od 1 do 5, kjer 1 pomeni popolnoma se ne strinjam in 5 popolnoma se strinjam. Da bi ugotovili, kakšno samopodobo imajo anketiranci, smo uporabili Tennessee Self-Concept Scale (TSCS), pri kateri udeleženci odgovarjajo na 100 trditev na lestvici od 1 do 5. Hkrati smo preverjali tudi stratifikacijske podatke. Za analizo podatkov smo uporabili regresijsko analizo in Pearsonov koeficient korelacije.

Rezultati. Med anketiranimi ni bilo razlik v ocenjevanju samopodobe glede na spol, državo bivanja ali stopnjo oz. vrsto invalidnosti. Prav tako ni bilo razlik pri vrednotenju športne identitete glede na pričakovano uvrstitev. S športno identiteto pojasnimo 5,0 % variabilnosti samopodobe. Regresijski model je statistično značilen ($F = 6,676$, $\alpha = 0,011$). Športna identiteta ima statistično značilen vpliv ($\alpha < 0,05$) na samopodobo. Regresijsko enačbo lahko zapišemo kot . Ugotovili smo, da ima športna identiteta statistično značilen pozitiven vpliv na samopodobo. Višja kot je športna identiteta športnikov invalidov, boljše samopodobo imajo.

Zaključek. Vključevanje v šport invalidov igra pomembno vlogo pri razvoju športne identitete, ki vpliva na samopodobo, socialno identiteto, subjektivno zadovoljstvo z življenjem, socialne interakcije, postopek rehabilitacije ter razvoj fizičnih zmožnosti, kot so moč, spretnost, ravnotežje, itd. Da bi povečali delež oseb po poškodbi v športni aktivnosti in tako pripomogli k boljši samopodobi, predlagamo, vključevanje v športne aktivnosti že v zaključnih fazah procesa rehabilitacije.

Gljučne besede: športna identiteta, samopodoba, alpsko smučanje, smučarji invalidi

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SATISFACTION OF CHILDREN WITH PLAYING IN DIFFERENT WORKOUT AREAS

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The Kindergarten Ivančna Gorica is located in a very beautiful natural environment where we have a lot of opportunities to use various workout areas. In the present study we wanted to determine the level of children's satisfaction when playing in the gym, on the playground, on the meadow and in the forest. Thus, four different workout areas were used during the research. On Monday we were in the woods, on Tuesday in the gym, on Wednesday on the meadow, on Thursday on the playground and on Friday we had an interview. The daily activities were carried out on the basis of five different activities such as: playing, throwing, jumping over hurdles, walking and climbing. We had a break every second week after our activities. We also used various accessories for activities in various workout areas. In the forest and on the meadow, we used natural materials while in the gym and on the playground we utilized sports accessories and other playground equipment.

In the study we used a quantitative technique of obtaining the results, in which we made use of an interview consisting of five open-ended structured questions, which we carried out every 14 days over a period of two months. The children presented their evaluations according to a pre-based scale with three possible answers (I liked it very much – score 1; I liked it a little less – score 2; I did not like it – score 3). The data obtained were processed quantitatively at the level of descriptive statistics by means of frequency distribution. The study involved 22 children aged 5 to 6 from the Kindergarten Ivančna Gorica, unit Pikapolonica. The hypotheses that we set out were: H1: There is a difference in children's satisfaction with playing among different workout areas, H2: The children will be most satisfied with playing in the forest and H3: There is a gender difference in children's satisfaction in different workout areas. We found out that the satisfaction of the children was different according to different workout areas. The children attributed

the highest level of satisfaction with playing in various workout areas to the gym, as the average score of the answer was 1.17, followed by playing on the playground with an average score of 1.23, then playing in the forest with a score of 1.35, and the lowest score was given to playing on the meadow which was 1.47. Before starting the study, we assumed that the children would be most satisfied with playing in the forest. However, the analysis of the interviews showed the children were most satisfied with playing in the gym with an average score of 1.17, while playing in the forest was estimated at 1.35. The Kindergarten Ivančna Gorica is included in the program of a forest kindergarten, by which we actively carry out the majority of activities in the forest. It was precisely because of this that we assumed that the second hypothesis would be confirmed by the children. However, it turned out resp. it proved to be exactly the opposite. We believe that it is precisely because of the program of the forest kindergarten, based on the activities in the forest, that somehow the children are not often included in organized activities in the gym, which in our opinion affected the children's satisfaction with playing in the gym. We also found that there were gender differences regarding satisfaction in different workout areas. The differences appeared in the activities such as games, jumping over hurdles and climbing. While playing the girls were most satisfied with playing in the gym with an average score of 1.17 and least on the meadow with a score of 1.60. The boys were most satisfied with playing on the playground with a score of 1.15 and least on the meadow with a score of 1.41. In jumping over hurdles, the girls were most satisfied with jumping in the gym with a score of 1.37 and least on the meadow with a score of 1.86. The boys were most satisfied with jumping in the gym with a score of 1.33 and least on the playground with a score of 1.44. In climbing the girls were most satisfied with climbing in the gym with a score of 1.11 and least in the forest with a score of 1.60. The boys were most satisfied with climbing on the meadow with a score of 1.09 and least in the forest with a score of 1.31.

Thus, we can conclude that during the study we realized it is important for us, educators, that during the time the children spend in the kindergarten, we use and offer to the children the most varied workout environment.

Zajec, Videmšek, Štihec, Pišot and Šimunič (2010, p. 85) emphasize that the kindergarten is a place where children spend most of their day. During this time, it is absolutely necessary to ensure such a choice of contents, whe-

re they will be able to acquire as much knowledge and abilities as possible both, indoors and outdoors.

One of the important factors of a high-quality performance of locomotor activities is undoubtedly adequately selected sports accessories and play-ground equipment as well as a suitable space (according to Marjanovič Umek, 2001, p. 59).

Locomotor activities and playing are primary children's needs. Parents, educators, teachers and all those who are in any way engaged in working with preschool children, can encourage them to perform locomotor activities and provide them with quality sports education, and thus we can have a positive influence on their integral development (according to Videmšek and Jovan, 2002, p. 7).

Key words: a preschool child, locomotor activities, playing, workout resp. playing areas

ZADOVOLJSTVO OTROK Z IGRO NA RAZLIČNIH VADBENIH POVRŠINAH

Vrtec Ivančna Gorica se nahaja v zelo lepem naravnem okolju, kjer imamo veliko možnosti za izkoriščanje različnih vadbenih površin. Z raziskavo smo želeli ugotoviti, kakšna je stopnja zadovoljstva otrok z igro v telovadnici, na igrišču, na travniku in v gozdu. Tako smo v času raziskave uporabili štiri različne vadbene površine. V ponedeljek smo bili v gozdu, v torek v telovadnici, v sredo na travniku, v četrtek na igrišču, v petek pa smo opravili intervju. Dnevne aktivnosti so potekale na osnovi petih različnih dejavnosti, in sicer: igra, metanje, preskakovanje, hoja in plezanje. Vsak drugi teden po opravljenih dejavnostih smo imeli premor. Pri dejavnostih na različnih vadbenih površinah smo uporabljali tudi različne pripomočke. V gozdu in na travniku smo uporabili naravni material, v telovadnici in na igrišču pa športne pripomočke ter igrala.

V raziskavi smo uporabili kvantitativno tehniko zbiranja podatkov, pri kateri smo uporabili intervju, ki je bil sestavljen iz petih strukturiranih vpra-

šanj odprtega tipa, in smo ga izvajali vsakih 14 dni v obdobju dveh mesecev. Otroci so svoje ocene podali glede na vnaprej zastavljeno lestvico s tremi možnimi odgovori (zelo mi je bilo všeč – ocena 1; malo manj mi je bilo všeč – ocena 2; ni mi bilo všeč – ocena 3). Dobljene podatke smo kvantitativno obdelali na nivoju deskriptivne statistike s pomočjo frekvenčne distribucije. V raziskavi je sodelovalo 22 otrok, starih od 5 do 6 let, iz vrtca Ivančna Gorica, enota Pikapolonica. Hipoteze, katere smo si zastavili, so bile: H1: obstaja razlika v zadovoljstvu otrok z igro glede na posamezne vadbene površine; H2: otroci bodo najbolj zadovoljni z igro v gozdu; H3: obstaja razlika med spoloma glede zadovoljstva otrok na posameznih površinah. Ugotovili smo, da je zadovoljstvo otrok različno glede na posamezne površine. Najvišje zadovoljstvo pri igri na različnih vadbenih površinah so otroci pripisali telovadnici, saj povprečna ocena odgovora znaša 1,17, sledila je igra na igrišču s povprečno oceno 1,23, nato igra v gozdu z oceno 1,35, najslabše pa je bila ocenjena igra na travniku 1,47. Pred začetkom raziskave smo predpostavljali, da bodo otroci najbolj zadovoljni z igro v gozdu. Analiza intervjujev pa je pokazala, da so bili otroci najbolj zadovoljni z igro v telovadnici, in sicer s povprečno oceno 1,17, medtem ko so igro v gozdu ocenili z oceno 1,35. Vrtec Ivančna Gorica je vključen v program gozdni vrtec, po katerem aktivno izvajamo večino dejavnosti v gozdu. Ravno zaradi tega smo predvidevali, da bo druga hipoteza s strani otrok potrjena, vendar se je izkazalo oz. potrdilo ravno nasprotno. Menimo, da otroci ravno zaradi programa gozdni vrtec, ki temelji na izvajanju dejavnosti v gozdu, na neki način niso velikokrat vključeni v organizirane dejavnosti v telovadnici, kar je po našem mnenju vplivalo na zadovoljstvo otrok pri igri v telovadnici. Prav tako smo ugotovili, da obstajajo razlike med spoloma glede zadovoljstva na posameznih površinah. Razlike so se pokazale pri dejavnostih igra, preskakovanje in plezanje. Pri igri so bile deklice najbolj zadovoljne z igro v telovadnici s povprečno oceno odgovora 1,17 in najmanj na travniku z oceno 1,60. Dečki so bili najbolj zadovoljni z igro na igrišču z oceno 1,15 in najmanj na travniku z oceno 1,41. Pri preskakovanju so bile deklice najbolj zadovoljne s preskakovanjem v telovadnici z oceno 1,37 in najmanj na travniku z oceno 1,86. Dečki so bili najbolj zadovoljni s preskakovanjem v telovadnici z oceno 1,33 in najmanj na igrišču z oceno 1,44. Pri plezanju so bile deklice najbolj zadovoljne pri plezanju v telovadnici z oceno 1,11 in najmanj v gozdu z oceno 1,60. Dečki so bili najbolj zadovoljni pri plezanju na travniku z oceno 1,09 in najmanj v gozdu z oceno 1,31.

Tako lahko zaključimo, da smo skozi izvedbo raziskave ugotovili, da je pomembno, da v času bivanja otrok v vrtcu vzgojitelji izkoristimo in ponudimo otrokom čim bolj pestro gibalno okolje.

Zajec, Videmšek, Štihec, Pišot in Šimunič (2010, str. 85) poudarjajo, da je vrtec kraj, kjer otroci preživijo pretežni del dneva. V tem času jim je nujno potrebno omogočiti takšno izbiro vsebin, kjer bodo lahko v zaprtem prostoru in zunaj usvojili kar največ znanja in sposobnosti.

Eden izmed pomembnih dejavnikov za kakovostno izvajanje gibalnih dejavnosti so nedvomno ustrezno izbrani športni pripomočki in igrala ter primeren prostor (povz. po Marjanovič Umek, 2001, str. 59).

Gibanje in igra sta primarni otrokovi potrebi. Starši, vzgojitelji, učitelji in vsi tisti, ki se kakor koli ukvarjamo s predšolskimi otroki, jih lahko namreč spodbujamo h gibanju, jim omogočimo kakovostno športno vzgojo in tako pozitivno vplivamo na njihov celostni razvoj (povz. po Videmšek in Jovan, 2002, str. 7).

Ključne besede: predšolski otrok, gibanje, igra, vadbene oz. igralne površine

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FUNDAMENTAL MOTOR SKILLS IN TRACK AND FIELD SCHOOL PARTICIPANTS

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Introduction. Fundamental motor skills (FMS) are defined as a standard motor activity that forms the basis for more advanced and more specific motor activities. Mastering FMS allows good preconditions for the successful realization of specific motor skills. Although FMS is acquired through the development process, it has been shown that not only free play stimulates their development, but also quality instruction is necessary. There are different classifications of FMS and the prevailing opinion is that FMS can be divided into two categories: basic locomotor skills and manipulative skills. Measuring instruments for assessing FMS can be divided into tests that are focused on the quantification of performance and the quality of performance. For the purpose of this research, the qualitative test "Test of Gross Motor Development - 2" was used. Some research suggests that there are significant differences in FMS between genders; however, it is not yet clear to what extent children's activities affect the above mentioned differences. Therefore, the aim of this study is to determine gender differences in manipulative and locomotor FMS as well as differences between basic locomotor and manipulative skills in boys and girls attending athletic sports school.

Methods. The study was conducted on a sample of fifty-three children (22 boys and 31 girls), aged seven to ten. To determine the FMS of younger age children, TGMD-2 test was applied. As the research was conducted on a heterogeneous sample of subjects (between seven and ten years of age), all applied data processing methods were implemented on standardized data from TGMD-2. After preliminary procedures, differences were found between individual subsamples of the subjects using student's t-test for independent samples.

Results. Based on the analyses carried out, results indicate that it is not possible to determine significant differences between boys and girls in FMS. However, the Independent Samples t-test showed significant differences between basic locomotor and manipulative skills in boys and girls attending athletic sports school.

Conclusion. Obtained results support the thesis that the differences between basic locomotor and manipulative skills in boys and girls occur primarily due to the specificity of sports activities that children deal with.

Key words: motor development, sport, motor learning, gender differences

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STROKOVNI PRISPEVKI/
PROFESSIONAL PAPERS

WHAT DOES THE CONCEPT “A FULLY ACTIVE CHILD” REALLY MEAN? - A VIEW ON MOTOR/SPORTS ACTIVITIES OF CHILDREN

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Background. Increasing numbers of children with a high body mass, their decreasing motor and functional abilities as well as competences, and a negative trend in some of the health indicators in children are all trends that both experts and lay people are aware of. Results of sports education testing confirm these trends, and thus raise serious concern. In order to reverse the trend, an in-depth analysis of the issues is needed if quality solutions are to be implemented.

Problem. High body mass, chronic diseases, decreasing functional and motor abilities are characteristic of people in Western civilisations. They have become issues in Slovenia, too. Neoliberalism, consumerism and other features of modern lifestyles have caused many a challenge. Increased access to electronic devices (computers, television, etc.) and their overly frequent use, access to the internet and social media strongly compete with some of the more primary and traditional activities of individuals and communities. Personal interactions on playgrounds, fields, meadows, areas in front of blocks of flats, etc. have been replaced by impersonal digital interactions in the virtual world.

In order to fully understand what is at stake, children have to be studied from different points of views – through an interdisciplinary approach. We could focus on anthropological, kinesiological, psycho-social, developmental biological and anato-physiological aspects only, however, the spiritual, historical and political-geographical aspects seem equally important. Only by considering all of these aspects can we understand the circumstances in which modern children are growing up and the challenges that need to be dealt with when children are encouraged to adopt a more active and healthy lifestyle. Therefore, models of sports activities – regardless how innovative

they may be – are mere drops in the ocean. Although motor activities may be more than welcome for kids, the solutions for the problems described above may lie elsewhere. Creating encouraging and safe environments for children should be our highest priority when trying to turn the negative trends that affect children's motor and functional abilities around. The responsibility for it should not be placed on kinesiologists, educators, sports teachers, doctors or other experts. They should be taken on by all adult individuals and societies as wholes.

The values of societies and relationships between people are always handed over to younger generations, therefore societies themselves need to take on a more active approach to movement, sports and culture as this will make children more active too. This can be achieved by enhancing connections in communities and individuals, with socialisation and empowerment of individuals and communities, by raising their awareness, encouraging the independence and autonomy of children, good relations and trust and similar.

So what is a fully active child? A fully active child is not the one who engages in perfect motor/sports activities three times a week and spends the rest of his/her time in front of a computer, television or smartphone. Spending more time on motor activities in schools is encouraging but may not solve children's problems. Fully active children are not such only at the right time slot in their timetables. Fully active children are active members of communities with a role to play and are not marginalised and pushed into the digital world. Fully active children take part in household chores, climb trees, play in the nearest playgrounds, fall and get up, socialize, argue, cry and lough. They carry their own rucksacks (of a suitable weight) and the burdens of responsibilities suitable to their age, they are as autonomous and independent as their age permits. They are also engaged in social activities of their communities. This is why it is the responsibility of adult individuals to nourish communities.

Methods. The main methods used were observation, work in practice, literature review, analysis and synthesis.

Findings and conclusions. A systemic and full consideration of the state of health and motor competence of children is needed as it represents the starting point for finding effective solutions and their application in practise. One of the main reasons for the negative trends in health indicators in

children and the degradation of children's motor competence is modern lifestyle. Therefore, the solutions that could change these negative trends in children and adults alike would have to be introduced thorough change in people's and communities' lifestyles.

Key words: active children, active life style

POGLED NA GIBALNO/ŠPORTNO AKTIVNOST OTROKA - KAJ POMENI POJEM CELOSTNO AKTIVEN OTROK

Izhodišča. Večanje števila otrok s prekomerno telesno maso, upadanje gibalnih in funkcionalnih sposobnosti ter gibalne kompetentnosti otrok in negativen trend nekaterih zdravstvenih kazalcev pri otrocih so pojavi, s katerimi je strokovna in laična javnost dodobra seznanjena. Rezultati športno-vzgojnega kartona so uradna potrditev teh teženj, ki vzbujajo skrb. Da bi te negativne premike obrnili proti optimumu, je potrebna aplikacija kvalitetnih rešitev, pred tem pa je nujno potrebna celostna analiza obravnavanega problema.

Problem. Prekomerna telesna masa, nekatere kronične bolezni, upad funkcionalnih in gibalnih sposobnosti so problemi sveta, kjer prevladuje zahodna kultura. S temi pojavi se vse bolj intenzivno soočamo tudi v Sloveniji. Neokapitalizem, potrošništvo ter ostali dejavniki, ki so temelj modernega načina življenja v zahodni družbi, s seboj prinašajo mnogo izzivov za človeka. Prekomerna uporaba in dostopnost elektronskih naprav (računalniki, TV...), pojav hitrega interneta in družabnih omrežij, predstavlja močno konkurenco nekaterim primarnim in tradicionalnim aktivnostim človeka kot posameznika in družbe kot celote. Neposredne interakcije na igriščih, njivah, travnikih, prostorih pred bloki itd., so v veliki meri nadomeščene z neosebniimi digitalnimi interakcijami v virtualnem svetu.

Da bi lahko obravnavano problematiko razumeli čim bolj temeljito, je potrebno na otroka kot subjekt pogledati s čim več zornih kotov - interdisciplinarno. V ospredje lahko postavimo antropološki, kineziološki, psiho-socialni, razvojno-biološki in anatomsko-fiziološki vidik, ne smemo pa zanemariti niti vpliva duhovnega, zgodovinskega in politično-geografskega vidika. Upo-

števanje celote teh dejavnikov nam pomaga razumeti okolje v katerem odrasča današnji otrok in s tem izziv s katerim imamo opravka, ko želimo otroke spodbuditi k aktivnemu in zdravemu življenjskemu slogu. S tega vidika je vsakršen še tako inovativen in dodelan model športne vadbe le kaplja v morje. Problematika je globlja kot se zdi na prvi pogled in čeprav so gibalne aktivnosti za otroka lahko dobrodošle, se ključne rešitve skrivajo drugje. Vzpostavljanje ožjega in širšega okolja, ki je do otroka spodbudno in ki mu zagotavlja določeno stopnjo varnosti bi morala biti ena od naših prednostnih nalog pri reševanju negativnega trenda upadanja gibalnih in funkcionalnih sposobnosti, prevelike telesne mase itd. Odgovornost vzpostavljanja optimalnega okolja za otrokov razvoj bi morala biti na plečih odraslih posameznikov ter družbe kot celote in nikakor ne le domena kineziologov, pedagogov, športnih vaditeljev, zdravnikov in drugih dotičnih strokovnjakov. Vrednote in odnosi, ki jih bo gojila družba, se bodo prenašali preko različnih mehanizmov učenja tudi na mlajšo populacijo. To pomeni, da je vsekakor bolje, če je skupnost kot celota (gibalno, športno, kulturno...) aktivna, saj to pomeni, da bodo ob tem aktivni tudi otroci. Ti procesi se vzpostavljajo s povezovanjem posameznikov in skupnosti, s socializacijo, z opolnomočenjem in ozaveščanjem družbe in posameznika, z vzpodbujanjem samostojnosti in avtonomnosti otrok, z gojenjem dobrih odnosov in zaupanja itd.

Kaj lahko razumemo pod pojmom celostno aktiven otrok? Na podlagi napisanega lahko sklepamo, da celostno aktiven otrok ni tisti, ki samo obiskuje trikrat tedensko še tako dovršeno gibalno/športno aktivnost, preostali čas pa preživi pred računalnikom, televizijo in pametnim telefonom. In čeprav se obetajo trendi večanja časa namenjenega gibalnim aktivnostim otrok v osnovnih šolah, kar je vsekakor vzpodbudno, se lahko zgodi, da bodo taki ukrepi le ublažili in delno rešili problem. Celostno aktiven otrok ni aktiven samo takrat, ko mu to določa urnik. Celostno aktiven otrok je aktiven član aktivne skupnosti, v kateri ima svojo vlogo in ni potisnjen na njeno obrobje, kjer se zatopi v digitalni svet. Celostno aktiven otrok sodeluje pri hišnih opravilih, pleza po drevesih, se igra na bližnjem igrišču in pred blokom, pade, se pobere, se druži, se skrega, se joče in se smeje. Nosi svoj (primerno težek) nahrbtnik in nosi svojo (primerno težko) odgovornost, je avtonomen in primerno samostojen. Je vpet v dogajanje ožje in širše skupnosti. Zato moramo posebno pozornost namenjati negovanju te skupnosti, kar je vloga in odgovornost odraslih posameznikov.

Metode. Glavne metode ki smo jih uporabili pri sestavljanju povzetka so opazovanje, delo v praksi, študij literature ter analiza in sinteza.

Ugotovitve in zaključek. Sistemska in celostna obravnava aktualnega zdravstvenega stanja in gibalnih kompetenc otrok je smiselna in služi kot izhodišče za tvorbo učinkovitih rešitev ter njihovo aplikacijo v prakso. Eden glavnih razlogov za pojav številnih škodljivih trendov, med drugim upad nekaterih zdravstvenih kazalcev in slabšanje gibalnih kompetenc otrok, je moderen način življenja. Iz tega sledi, da je za korenite spremembe negativnih zdravstvenih in gibalnih pojavov v populaciji otrok in preostali populaciji, neobhodna sprememba življenjskega sloga, tako posameznika kot družbe kot celote.

Ključne besede: aktiven otrok, aktiven življenjski slog

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STRENGTH AND POWER DEVELOPMENT IN THE PRESCHOOL PERIOD/EARLY CHILDHOOD

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Background. Strength and power exercise in children and youngsters has been controversial and causing concern. Often this is due to a lack of understanding of issues involved or a lack of agreement on what some of the key concepts entail. Strength and power exercise may namely cover anything from the first manifestation of power or strength in a child's motor system to specific training that aims to build up strength. From a developmental perspective, strength and power exercise involves a continuous building of strength from the prenatal period into adulthood as well as the activities of elite sportsmen and sportswomen.

Problem. Teachers, coaches and all those involved in motor activities of children and youngsters tend to face a dilemma when trying to define strength and power training and place it in the activity process. It is a key to understand what strength and power mean and to know their forms. In a wider sense, strength can refer to the ability to use one's muscle force effectively to withstand an external force. Most often, strength is defined as force, which represents the ability of muscles to do a certain amount of work, as strength, which represents the ability of muscles to develop maximum torque and as power, which is defined by the amount of work produced in a defined amount of time. Strength and power can be actually referred to as maximum strength connected with producing force, and fast power that reaches the highest values when force and speed are at play together.

Thus, based on the above definitions, we could argue that building up strength (strength and power exercise in its widest meaning) is something that develops from a prenatal period onward. A child's survival and its development depend on the strength that it can produce and the power of its motor apparatus. Since increasing strength in early childhood depends on intramuscular in intermuscular coordination, we could also say that the de-

velopment of strength is closely connected with and mutually dependent on the development of the nervous system and cognitive abilities in children. Therefore, encouraging strength and power building in children is not only recommended but also essential for their harmonious development.

At this point, one may ask what strength and power exercise involves in early childhood. It has to be stressed that the concept of strength and power exercise in early childhood needs to be disconnected from the conventional images of strength and power training activities. In early childhood, strength and power exercise does not entail activities that build up strength with specific movements and by withstanding force with the use of specific equipment and weights. Basically, it involves activities that develop coordination, i.e., motor exercises that encourage the development of intermuscular and intramuscular coordination, and strength and power with them. We could say that strength and power exercise in early childhood is exercising coordination in atypical/difficult circumstances. The great majority of stimuli are actually new movements that children need to develop on their way to independence.

In early childhood, we need to focus on natural forms of movement, which represent a substantial stimulus for developing strength and power in kids. The roles of adults in creating safe and encouraging circumstances for children cannot be overstressed. Adults can do most for children's strength and power building and general development when they create conditions for children that allow them to look for movement solutions themselves, do their best and explore space, when they are given the responsibility to put away equipment, etc. Play is the most important method – regardless whether it is spontaneous or guided. Tug of war, pushing and shoving, climbing, falling, fighting, jumping, searching for solutions, finding balance while making first steps, tidying and carrying pillows, jumping for joy and tickling, etc. - these all represent the basis for developing power and strength.

Methods. The main methods used in this study are observation, practical work, literature review, analysis and synthesis.

Findings and conclusion. The expression of muscle strength and power is the basis of movement; therefore, its development is closely connected with motor development in children. Strength and power training in children is intertwined with children's overall development processes from pre-

natal times. Learning new movements, regardless how simple they may be, can represent a powerful stimulus in itself. Meeting the criteria for strength and power training and general development of healthy children is possible with as little as natural forms of movement and their modifications. The importance of adults when creating safe and encouraging circumstances for children's development cannot be overstated.

Key words: strength and power training, training children and youngsters

RAZVOJ MOČI V PREDŠOLSKEM OBDOBJU/ZGODNJEM OTROŠTVU

Izhodišča. Področje vadbe moči pri otrocih in mladostnikih je v mnogokrat predmet soočanja različnih mnenj in velikokrat vzbuja razne pomisleke. V veliko primerih prihaja do tega zaradi neznanja in nedefiniranosti pojmov v povezavi s to tematiko. Vadba in pridobivanje moči je lahko zelo široka tematika, ki se razteza od prve manifestacije sile in moči gibalnega aparata do specifične vadbe za moč. Gledano s stališča razvoja človeka to pomeni vadbo oziroma kontinuirano pridobivanje moči od prenatalnega obdobja do obdobja odraslosti in s tem do aktivnosti vrhunskih športnikov.

Problem. Pedagogi, trenerji, vaditelji in sploh vsi, ki se tako ali drugače ukvarjajo z gibalno aktivnostjo otrok in mladostnikov, so nemalokrat v dilemi kako definirati vadbo moči ter kako jo umestiti v vadbeni proces. Ob tem ima ključno razumevanje pojma moči in njenih pojavnih oblik. V najširšem pomenu lahko moč označimo kot sposobnost za učinkovito izkoriščanje mišične sile pri premagovanju zunanjih sil. Pod pojmom moči si največkrat razlagamo mišično silo (force), ki predstavlja sposobnost mišice, da opravi delo, mišično jakost (strenght), ki je sposobnost mišice, da razvije silo/navor ter mišična moč (power), ki je tesno povezana s hitrostjo opravljenega dela. Termina »strenght« in »power« bi lahko povzeli tudi kot maksimalno moč, povezano s proizvodnjo sile, in hitro moč, ki zavzema najvišje vrednosti ob produktu sile in hitrosti. Če izhajamo iz navedenih definicij, lahko sklepamo da pridobivanje moči (in s tem vadba za moč v najširšem pomenu) poteka od rojstva, oziroma

že v prenatalnem obdobju. Konec koncev sta otrokovo preživetje in razvoj zelo odvisna od produkcije moči in navorov gibalnega aparata. Če vemo, da je večanje moči v zgodnjem otroštvu zelo vezano na znotrajmišično in medmišično koordinacijo, je smiselno sklepati tudi to, da je razvoj moči tesno povezan in povratno soodvisen od razvoja živčnega sistema in kognitivnih sposobnosti. To pomeni, da je za skalden razvoj otroka ne samo priporočljivo, temveč celo nujno spodbujati vadbo za moč.

Ob tem se znajdemo na ključni točki obravnavane problematike - kako izgleda vadba za moč v zgodnjem otroštvu. Nujno je potrebno poudariti, da moramo pojem vadbe moči v zgodnjem otroštvu ločiti od konvencionalnih predstav o vadbi za moč. V tem primeru v glavnem ne gre za vadbo in pridobivanje moči s specifičnimi gibi in premagovanjem odpora s pomočjo specifičnih pripomočkov (trenažerjev, uteži...). V osnovi gre za vadbo splošne koordinacije oziroma izvajanje gibov, ki vzpodbujajo razvoj medmišične in znotrajmišične koordinacije in s tem moči. Lahko bi rekli, da je vadba za moč v zgodnjem otroštvu predvsem vadba koordinacije v oteženih razmerah. Pretežni del dražljajev seveda predstavljajo novi gibi, ki jih otrok mora osvojiti na poti do samostojnosti.

Med sredstvi za razvoj moči v zgodnjem otroštvu je potrebno v ospredje postaviti naravne oblike gibanja, ki sama po sebi predstavljajo velik dražljaj za razvoj moči. Ob tem je zelo pomembna vloga odraslega, ki vzpostavlja varno in spodbudno okolje za otroka. S tem ko se otroku omogoča, da sam poišče gibalno rešitev, da mu pustimo da se potruzi, da sam pospravi opremo, da igraje raziskuje prostor itd., se ogromno naredi za razvoj otrokove moči in otrokov vsestranski razvoj. Od metod je daleč v ospredju igra, pa naj bo ta spontana ali usmerjena. Vlečenja vrvi, potiskanja, plezanja, padci, borbe, skoki, prerivanja, iskanja rešitve iz zagate, lovljenja ravnotežja ob prvih korakih, pospravljanje in nošenje blazin, rajanja, žgečkanja itd. - vse to predstavlja izhodišče za razvoj temeljnih razsežnosti moči ter možnost za njen nadaljnji specifični razvoj.

Metode. Glavne metode, ki smo jih uporabili pri sestavljanju povzetka so opazovanje, delo v praksi, študij literature ter analiza in sinteza.

Ugotovitve in zaključek. Izraz mišične moči je temelj gibanja in njen razvoj je tesno povezan z gibalnim razvojem. Vadba za moč je prepretena z otrokovim vsesplošnim razvojem že od prenatalnega obdobja. Učenje novih,

čeprev preprostih gibov, je že samo po sebi lahko močen dražljaj. Z izvajanjem naravnih oblik gibanja in raznih modifikacij le teh, je možno zadovoljiti kriterije razvoja moči in splošnega razvoja zdravega otroka. Izpostaviti je potrebno vlogo odraslega, čigar naloga je vzpostavljati varno in spodbudno okolje za otrokov razvoj.

Ključne besede: vadba za moč, vadba otrok in mladostnikov

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THE EFFECTS OF PLAYING HOCKEY ON THE SOCIAL SKILLS AND PHYSICAL CAPABILITY IN 5-6 YEAR OLD BOYS WHEN UTILISING EXTRACURRICULAR ACTIVITIES

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Starting point. In the article, I describe the movement characteristics of children in the first two months of the implementation of sports lessons, which I run twice a month in the morning at the gym at the kindergarten in the school year 2016/17. I am starting from the assumption that the effect of exercise is greater in smaller groups.

Problem. In the theoretical part, I also highlight the differences in body characteristics and physical abilities of children, and their motivation and evaluation of their own well-being before and after exercise.

Methods. I used the method of play, the demonstration of a teacher as an explanation of motion and the use of a video. The great importance of hockey playing is given to "giving the puck" to more skilled children less skilled in order to develop the skills of mutual cooperation in the team.

Findings. I find that playing hockey promotes team collaboration among children in terms of developing social skills and, consequently, better physical fitness. An equal burden causes different levels of effort in different individuals and can cause discomfort, but has proven to be a challenge.

Conclusion. In the continuation of this paper, I describe the confrontation of small hockey players with a co-operating sports spirit, which I develop through my hockey during the summer with the aim of developing the skills of mutual cooperation in the team. In the final part, I describe how the children experienced the game, the awareness of positive effects on health and physical performance.

Key words: hockey, social skills, effects on health, team spirit

UČINKI IGRANJA HOKEJA NA SOCIALNE VEŠČINE IN TELESNO ZMOGLJIVOST PRI 5-6 LETNIH DEČKIH V SKLOPU INTERESNE DEJAVNOSTI

Izhodišče. V prispevku na začetku opisujem gibalne značilnosti otrok v prvih dveh mesecih izvajanja športnih uric, ki jih vodim dvakrat mesečno v dopoldanskem času v telovadnici vrtca v šolskem letu 2016/17. Izhajam iz predpostavke, da je učinek vadbe večji v manjših skupinah.

Problem. V teoretičnem delu osvetlim tako razlike v telesnih značilnostih in gibalnih sposobnosti otrok ter njihovo motivacijo in vrednotenje lastnega počutja pred in po vadbi.

Metode. Uporabljala sem metodo igre, demonstracije vzgojitelja kot pojasnjevanja gibanja in uporabo videa. Velik pomen med igro hokeja dajem »podajanju paka« spretnejših otrok manj spretnejšim z namenom razvijanja spretnosti medsebojnega sodelovanja v timu.

Ugotovitve. Ugotavljam, da je igranje hokeja spodbuja timsko sodelovanje med otroki z vidika razvijanja socialnih veščin in posledično tudi boljšo telesno kondicijo. Enaka obremenitev povzroči pri različnih posameznikih različno stopnjo napora in lahko povzroča nelagodje, a se je pokazala kot izziv.

Zaključek. V nadaljevanju prispevka opisujem soočanje malih hokejistov s sodelovalnim športnim duhom, ki ga skozi hokej razvijam tekom leta z namenom razvijanja spretnosti medsebojnega sodelovanja v timu. V zaključnem delu opišem, kako so otroci doživljali igro, zavedanje pozitivnih učinkov na zdravje in telesno zmogljivost.

Ključne besede: hokej, socialne veščine, učinki na zdravje, timsko sodelovanje

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RECOGNITION A MOTORIC TALENTED CHILDREN IN THE KINDERGARTEN

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Basic Premise. Motor talent consists of above-average motor abilities, creativity and commitment in solving motor tasks, and depends primarily on the environment in which the child lives (kindergarten/school, family, peers). Identifying motor talent is the first step in working with motor talented children.

Problem. The purpose of the research was to determine, on the basis of an interview with children and parents, how many children are motor talented by gender and by place of residence.

Methods. As a measurement instrument in our research we use a guided interview presented in the guide *Let's discover and develop the child's talent* (Kraft and Semke, 2008). The authors divided the children into three categories: *A little talented*, *Quite talented*, *Very talented*. We used a causal, non-experimental research method. The sample represents 225 children of both sexes (108; 48.0% girls, 117; 52.0% boys) at the age of five to six years and 225 of their parents. In the urban environment live 94; 41.8% of respondents, 131; 58.2% of respondents live in rural areas. A standardized interview consisting of closed-type questions was conducted separately with children (five questions) and especially with parents (twelve questions). Descriptive statistics (frequency distribution and percentages) were used for data processing.

Findings. Based on the answers of children and parents, we find that out of all the children included in the research, there are *A little talented* 18; 8.0%, *Quite talented* 100; 44.4% and *Very talented* 107; 47.6%. In terms of gender, we find that there are a lot of *Very talented* boys (60; 51.3%) as girls (47; 43.5%); *Quite talented* boys are 49; 41.5% and girls 51; 47.2%. *A little*

talented boys is 8; 6.8%, girls 10; 9.3%. In rural areas, several *Very talented* children (63; 48.1%) are recognized in the urban environment (44; 46.8%) and more *Quite talented* (60; 45.8%) than in the urban environment (40; 42.6%). In the urban environment are more *A little talented* children (10; 10.6%) than in rural areas (8; 6.1%).

Conclusions. Those findings are valid only for the sample of children who participated in the research. Data on motor talent are obtained only on the basis of an interview.

We assume that the answers in the interview used are highly dependent on the current mood of children and probably also from the subjective assessment of parents. In the pre-school period is the intensive development of physical, motor, emotional, social and cognitive area. For the more objective recognition of motor talented children we additionally use of motor tests, which would also provide information on the motor structure of children. This would make it easier to do the second step in working with motor talented children - the preparation and implementation of high-quality physical activities for motor talented children. This way, these children will gain additional motor competencies and a broad motor base for upgrading their motor talent and for achieving top sporting results in later periods.

Key words: motor talent, parents, children, gender, place of residence

PREPOZNAVANJE MOTORIČNO NADARJENIH OTROK V VRTCU

Izhodišče. Motorično nadarjenost sestavljajo nadpovprečne motorične sposobnosti ter kreativnost in zavzetost pri reševanju motoričnih nalog, odvisna pa je predvsem od okolja, v katerem otrok živi (vrtec/šola, družina, vrstniki). Prepoznavanje motorične nadarjenosti je prvi korak pri delu z motorično nadarjenimi otroki.

Problem. Namen raziskave je bil na osnovi intervjuja otrok in staršev ugotoviti, koliko so otroci motorično nadarjeni glede na spol in kraj bivanja.

Metode. Kot merski instrument smo uporabili vodeni intervju, predstavljen v priročniku *Odkrijmo in razvijmo otrokovo nadarjenost (Kraft in Semke,*

2008). Avtorja sta razdelila otroke v tri kategorije: *manj motorično nadarjeni*, *srednje motorično nadarjeni*, *zelo motorično nadarjeni*. Uporabili smo kavzalno ne-eksperimentalno metodo raziskovanja. Vzorec predstavlja 225 otrok obeh spolov (108; 48,0 % deklic, 117; 52,0 % dečkov) v starosti pet do šest let in 225 njihovih staršev. V urbanem okolju živi 94; 41,8 % anketirancev, 131; 58,2 % anketirancev živi v ruralnem okolju. Vodeni intervju je sestavljen iz vprašanj zaprtega tipa je bil izveden posebej z otroki (pet vprašanj) in posebej s starši (dvanajst vprašanj). Za obdelavo podatkov smo uporabili deskriptivno statistiko (frekvenčna distribucija in odstotkovni deleži).

Ugotovitve. Na osnovi odgovorov otrok in staršev ugotavljamo, da je od vseh otrok, vključenih v raziskavo, *manj motorično nadarjenih* 18; 8,0 %, *srednje motorično nadarjenih* 100; 44,4 % in *zelo motorično nadarjenih* 107; 47,6 %. Glede na spol ugotavljamo, da je več *zelo motorično nadarjenih* dečkov (60; 51,3 %) kot deklic (47; 43,5 %), *srednje motorično nadarjenih* dečkov je 49; 41,5 %, deklic pa 51; 47,2 %. *Manj motorično nadarjenih* dečkov je 8; 6,8 %, deklic 10 ; 9,3 %. V ruralnem okolju je prepoznanih več *zelo motorično nadarjenih* otrok (63; 48,1 %) kot v urbanem okolju (44; 46,8 %) in več *srednje motorično nadarjenih* (60; 45,8 %) kot v urbanem okolju (40; 42,6 %). V urbanem okolju pa je več *manj motorično nadarjenih* otrok (10; 10,6 %) kot v ruralnem okolju (8; 6,1 %).

Zaključek. Navedene ugotovitve veljajo samo za vzorec otrok, ki so sodelovali v raziskavi. Podatki o motorični nadarjenosti so pridobljeni samo na osnovi intervjuja. Predvidevamo, da so odgovori v intervjuju zelo odvisni od trenutnega razpoloženja otrok in verjetno tudi od subjektivne ocene staršev. V predšolskem obdobju poteka intenzivni razvoj na telesnem, gibalnem, čustvenem, socialnem in spoznavnem področju. Za objektivnejše prepoznavanje motorično nadarjenih otrok dodatno predlagamo izvedbo motoričnih testov, s katerimi bi pridobili še podatek o motorični strukturi otrok. Tako bi lažje naredili drugi korak pri delu z motorično nadarjenimi otroki – pripravo in izvedbo kvalitetnih gibalnih/športnih dejavnosti za motorično nadarjene otroke, s pomočjo katerih bi ti otroci pridobili dodatne motorične kompetence in široko motorično osnovo za nadgradnjo svoje motorične nadarjenosti ter za doseganje vrhunskih športnih rezultatov v kasnejših obdobjih.

Ključne besede: motorična nadarjenost, starši, otrok, spol, kraj bivanja

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USE OF ELEMENTARY GAMES AND TPR ACTIVITIES FOR BLIND AND VISUALLY IMPAIRED CHILDREN

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Introduction. Blindness and visual impairment are sensory disorders.

Problem. Lack or deficiency of visual stimuli reduces motor activity of blind and visually impaired children, leading to possible disorders in motor development, and also other aspects of their interactions (mental, social etc.). Play has an important role when it comes to facilitating children's development of complete, harmonic and creative personalities, be it for blind or visually impaired children, or children without visual impairments. As such participation in elementary games and TPR activities enables blind and visually impaired children to correct deficits in the area of their motor, mental and social development, and enhances their independence, mobility and spatial orientation.

Methods. This article provides knowledge and guidelines, with the aim of ensuring safe practice of elementary games and TPR (total physical response) activities within a group of blind and visually impaired children. Teaching methods and strategies are briefly touched upon, as is customisation (modification) of exercise area and sport utilities used for elementary games and TPR activities, that include blind and visually impaired children.

Findings. Based on authors' experience (obtained by conducting elementary games and TPR activities in exercise groups of blind and visually impaired children and also with children without visual impairments), examples are provided to present mechanics of adjusted rules of elementary games and TPR activities and changes required to rules of motion for participants.

Conclusions. Adjusted rules of elementary games and TPR activities and changes required to rules of motion for participants which enable blind, visually impaired children, and children without visual impairment to actively

participate and achieve pre-set goals of the original elementary game or TPR activity.

Key words: blind and visually impaired, TPR activities, elementary games,

UPORABA ELEMENTARNIH IGER IN IGRARIJ ZA SLEPE IN SLABOVIDNE OTROKE

Izhodišče. Slepota in slabovidnost sta senzorni motnji.

Problem. Odsotnost, oz. pomanjkanje vidnih spodbud, zmanjšuje gibalno aktivnost slepih in slabovidnih otrok, posledica česar so lahko motnje v gibalnem razvoju, kot tudi na drugih področjih njihovega delovanja (na duševnem, socialnem ipd.). Igra ima pomembno vlogo pri razvoju otrok v celostno, harmonično in ustvarjalno osebnost, tako pri zdravih, kot tudi slepih in slabovidnih. Slepim in slabovidnim udeležba v elementarnih igrah in igrarijah namreč omogoča odpravljanje primanjkljajev na področju gibalnega, duševnega in socialnega razvoja, kot tudi samostojnost v mobilnosti in orientaciji v prostoru.

Metode. V prispevku so predstavljena znanja in napotki, s katerimi se slepim in slabovidnim otrokom, pri uporabi elementarnih iger in igrarij, omogoča varno sodelovanje v skupini. Na kratko so predstavljene učne metode in strategije poučevanja ter prilagoditve vadbenega prostora in športnih pripomočkov, ki se uporabljajo pri izvajanju elementarnih iger in igrarij v katere so vključeni slepi in slabovidni.

Ugotovitve. Na osnovi izkušenj avtorjev prispevka (elementarne igre in igrarije sta izvajala v vadbenih skupinah slepih in slabovidnih, kot tudi videčih otrok), so s primeri predstavljene zakonitosti prilagojenih pravil elementarnih iger in igrarij ter prilagoditve pravil za gibanje vadečih.

Zaključek. Prilagojena pravila elementarnih iger in igrarij ter prilagoditve pravil za gibanje vadečih, slepim in slabovidnim, pa tudi videčim, omogočajo aktivno udeležbo ter doseganje zastavljenih ciljev originalne elementarne igre, oz. igrarije.

Ključne besede: slepi in slabovidni, igrarije, elementarne igre

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THE IMPORTANCE OF WALKING FOR THE DEVELOPMENT OF MOTORIC ABILITIES IN THE PRESCHOOL PERIOD

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With the present research, by carrying out locomotoric tests, we wanted to determine whether there would be any eventual differences between a group of children who had daily organized walking activities and a group in which they did not give particular emphasis to walking at that time.

We carried out a one-year study resp. an experiment consisting of 23 preschool children from the vicinity of Ivančna Gorica, aged 2 to 3 years. The experimental group consisted of 13 children from the Kindergarten Ivančna Gorica, unit Marjetica, who had daily organized and planned activities connected with walking over a period of one year.

For this purpose, day-to-day intensive walks were performed over different surfaces and several hiking trips were made within a year. The control group consisted of 10 children from the Kindergarten Ivančna Gorica, unit Polžek, Višnja Gora, who did not give specific focus to activities connected with walking.

In order to collect the data, we used eight different motoric tests, with which we measured the coordination (rolling a ball around the feet - KZO, two-foot jumps - SOP, zigzag running - TCC, backward walking through hops - HSO), precision (rolling a ball around the feet - KZO), speed (zigzag running - TCC, running 20 meters - T20), balance (Romberg 's test – standing on the left and on the right foot - RTL and RTD) and explosive power (two-foot jumps - SOP, long jump from place - SDM), which we repeated five times over a period of one year.

Both the experimental and the control group were provided with the same accessories and the same conditions for carrying out the tests. All children performed the tests at the gym in the morning. With the tests we tried to determine whether there would be any statistically significant differences

in the results of testing of motoric abilities between the children from the experimental and those from the control group, and whether their day-to-day guided and organized walking activities have a positive impact on the development of motoric abilities of children, as well as whether the children who walk over different surfaces on a daily basis make more progress in the motor development than the children who do not do this every day.

To compare the difference between the experimental and the control group, we used the T-test for independent samples. The calculation of the T-test showed that there were no statistically significant differences between the groups ($p = 0.097$; $p > 0.05$), which means that there are no differences in the results of the tests of motoric abilities. Although the children of the experimental group did not achieve any better results on individual tests of motoric abilities than the children of the control group, we proved it on the basis of the progress which was better with the children who had day-to-day guided walking activities.

The Z-value showed that the average of all tests was in favor of the control group, as they achieved a final result (0.2330), which is better than with the children of the experimental group (-0.2135). A big difference is also evident at the beginning of the tests, as the control group children achieved better results (0.37046) than the children of the experimental group (-0.45647).

In the study, on the basis of the tests resp. motoric abilities, we wanted to find out and explore in detail the influence of daily organized walking activities on the development of motoric abilities of children. Through our work we followed the goal, which was to find differences in the test results resp. motoric abilities between the children from the experimental and those from the control group. Using the tests, we obtained the data that were also analyzed for obtaining hypotheses.

Despite all the findings shown by the calculations in favor of the control group, we can still claim that in the experiment, more progress during the first and final testing was achieved by the children from the experimental group, therefore on the basis of those findings we could confirm that day-to-day guided and organized walking activities positively influence the development of motoric abilities of children and that the children who walk over different surfaces every day make more progress regarding their motoric development than those who not do this on a daily basis, but progress is not

only a consequence of the performed activities, it is mainly due to growth and maturation, since motoric abilities, like other human abilities, are to some extent innate, however, they can also be acquired with appropriate exercise.

Key words: locomotor/sports activities, a preschool child, motoric development

POMEN HOJE ZA RAZVOJ MOTORIČNIH SPOSOBNOSTI V PREDŠOLSKEM OBDOBJU

Z raziskavo smo želeli preko gibalnih oz. motoričnih testov ugotoviti, ali bo prihajalo do morebitnih razlik med skupino otrok, ki so imeli vsakodnevne organizirane dejavnosti s področja hoje, in skupino, ki v tem času hoji ni namenila posebnega poudarka.

Izvedli smo enoletno raziskavo oz. eksperiment, ki ga je predstavljalo 23 predšolskih otrok iz okolice Ivančne Gorice, starih od 2 do 3 let. Eksperimentalno skupino je sestavljajo 13 otrok iz Vrtca Ivančna Gorica, enota Marjetica, ki so v obdobju enega leta imeli vsakodnevne organizirane in načrtovane dejavnosti s področja hoje.

V ta namen so izvajali vsakodnevne intenzivne sprehode, ki so potekali na različnih površinah, v obdobju enega leta pa so opravili tudi več pohodniških izletov. Kontrolno skupino je sestavljalo 10 otrok iz Vrtca Ivančna Gorica, enota Polžek, Višnja Gora, ki niso namenjali posebnega poudarka dejavnostim s področja hoje.

Za pridobivanje podatkov smo uporabili osem različnih motoričnih testov, s katerimi smo izmerili koordinacijo (kotaljene žoge okrog stopal – KZO, sonožni poskoki – SOP, tek cik-cak – TCC, hoja skozi obroče nazaj - HSO), preciznost (kotaljenje žoge okrog stopal – KZO), hitrost (tek cik-cak – TCC, tek 20 metrov – T20), ravnotežje (Rombergov test – stoja na levi in desni nogi– RTL in RTD) in eksplozivno moč (sonožni poskoki – SOP, skok v daljino z mesta - SDM), katere smo ponovili petkrat v obdobju enega leta.

Tako eksperimentalni kot kontrolni skupini so bili zagotovljeni isti pripomočki in enaki pogoji za opravljanje testov. Vsi otroci so opravljali tes-

tiranja v telovadnici v dopoldanskem času. S testi smo želeli ugotoviti, ali bodo obstajale statistično pomembne razlike pri rezultatih testiranja motoričnih sposobnosti med otroki iz eksperimentalne in kontrolne skupine in ali vsakodnevne vodene in organizirane dejavnosti hoje pozitivno vplivajo na razvoj motoričnih sposobnosti otrok kot tudi, če otroci, ki vsakodnevno hodijo po različnih površinah, bolj napredujejo v gibalnem razvoju od otrok, ki tega vsakodnevno ne počnejo.

Za primerjanje razlike med eksperimentalno in kontrolno skupino smo za neodvisne vzorce uporabili T-test. Izračun T-testa je pokazal, da med skupinama ne prihaja do statistično značilnih razlik ($p = 0,097$; $p > 0,05$), kar pomeni, da ne obstajajo razlike v rezultatih testov gibalnih oz. motoričnih sposobnosti. Čeprav otroci eksperimentalne skupine niso dosegli boljših rezultatov na posameznih testih gibalnih oz. motoričnih sposobnosti kot otroci kontrolne skupine, pa smo to dokazali na podlagi napredka, ki je bil večji pri otrocih, ki so imeli vsakodnevne vodene dejavnosti s področja hoje.

Z-vrednost je pokazala, da je povprečje vseh testov v prid kontrolni skupini, saj so dosegli končen rezultat (0,2330), kar je boljše kot otroci eksperimentalne skupine (-0,2135). Velika razlika je vidna tudi na začetku testiranja, saj so otroci kontrolne skupine dosegli boljše rezultate (0,37046) kot otroci eksperimentalne skupine (-0,45647).

V raziskavi smo na podlagi testov oz. motoričnih sposobnosti želeli ugotoviti in podrobneje raziskati vpliv vsakodnevne organizirane dejavnosti s področja hoje na razvoj motoričnih sposobnosti otrok. Skozi delo smo sledili cilju, ki je bil iskanje razlik v rezultatih testov oz. motoričnih sposobnosti med otroki iz eksperimentalne in kontrolne skupine. S pomočjo testov smo pridobili podatke, ki smo jih za pridobitev hipotez tudi analizirali.

Kljub vsem ugotovitvam, ki jih kažejo izračuni v prid kontrolni skupini, pa lahko trdimo, da so v času eksperimenta večji napredek med prvim in zadnjim testiranjem dosegli otroci iz eksperimentalne skupine, zato smo lahko na podlagi teh ugotovitev potrdili, da vsakodnevne vodene in organizirane dejavnosti hoje pozitivno vplivajo na razvoj motoričnih sposobnosti otrok in da otroci, ki vsakodnevno hodijo po različnih površinah, bolj napredujejo v gibalnem razvoju od otrok, ki tega vsakodnevno ne počno, vendar pa napredek ni le posledica izvedenih dejavnosti, pač pa predvsem posledica rasti in

zorenja, saj so gibalne sposobnosti, kot tudi druge človekove sposobnosti, v določeni meri prirojene, s primerno vadbo pa so lahko pridobljene.

Ključne besede: gibalne / športne dejavnosti, predšolski otrok, motorični razvoj

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UPPER STANDARD PROGRAMMES WATER GAMES FOR PRESCHOOL CHILDREN AND WINTER GAMES FOR PRESCHOOL CHILDREN IN VRTEC PTUJ

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Basic premise. Natural forms of movement, that compile to more structured when children become older, play a vital role in person's future physical and also emotional development. Children need to have the basic opportunities to perform different types of indoor/outdoor activities. Nowadays parents, teachers, schools, sport societies are aware of the positive affect of being physically active.

Problem. Whilst the majority of children attend water games, the number of children, involved in the winter games, is significantly lower, although the attendance is on a upturn in the recent years. Vrtec Ptuj has been carrying out water and winter games for preschool children, aged between 5 and 6, for a number of years. Water games for preschool children and winter games for preschool children are upper standard programs and are outsourced activities. Outside companies are a matter of public tender. The programmes are completely financed by parents.

Methods. With a survey and a questionnaire, which was handed out to parents, we found out, why preschool children aren't relatively equally involved in both upper standard programmes. The main reason are the costs.

Findings. Majority of preschool children are already adopted to water, which means they put their head under the water and they can manage at least of couple of swimming strokes to keep above water. Therefore parents do not enrol them in such activities. Meanwhile our opinion, why less children are enrolled in winter games, is simply the higher fee they have to pay, so that their children can learn to ski or learn to board. We also believe, that they are more willing to invest in modern technology than winter sports.

Conclusion. The difference in fees regarding water and winter games is quite high. Upper standard programme water games is up to 4-times cheaper what of that in the winter. Water games cost about 32,50 EUR, meanwhile the winter games cost about 135 EUR (last year's fee). It is worth mentioning that the price has gone down by 20 EUR this year. The expense plays a vital role, because it is completely financed by children's parents and it is not subsidized in any way.

Key words: adapting to water, child development, motion, skiing basics (descending, winding, stopping), sport.

NADSTANDARDNA PROGRAMA IGRE V VODI IN IGRE NA SNEGU V VRTCU PTUJ

Izhodišča. Gibalni razvoj je v razvoju človekovih funkcij v ospredju predvsem v prvih letih življenja. Razvoj poteka od naravnih oblik gibanja do zelo celostnih in skladnostno zahtevnejših športnih dejavnosti v povezavi z zorenjem, učenjem in posameznikovo lastnovoljno aktivnostjo. V predšolskem obdobju otrok pridobiva raznovrstne izkušnje zlasti z igro (Videmšek in Pišot, 2007).

Če otrok nima možnosti za izvajanje različnih gibalnih dejavnosti, lahko zaostane v gibalnem razvoju. Da se to ne bi zgodilo, je dobro, da otroke že zelo zgodaj navajamo na gibanje doma in v naravi (Videmšek in Pišot, 2007).

V sodobnem času se velika večina skrbnih staršev zaveda, da sta gibanje in šport eden od pomembnejših dejavnikov otrokovega razvoja. Pogoste dejavnosti v celoti pozitivno vplivajo na otrokov razvoj in sposobnosti. Na srečo je vedno več staršev, ki to vedo, in vedno več društev, šol, klubov ter vrtcev, ki organizirajo vadbo za najmlajše (Zaplatič, 2009). Temu se pridružuje tudi Vrtec Ptuj, saj se tako vzgojiteljice kot športni pedagogi, starši in sorodniki zavedajo, da morajo otrokom uresničevati potrebo po gibanju in igri.

Zavedanje staršev o pomenu predšolske športne vzgoje predstavlja otroku trden most k njegovemu kakovostnejšemu preživljanju prostega časa

s športnim udejstvovanjem tudi v kasnejših obdobjih življenja (Videmšek, Strah in Stančevič, 2001).

Problem. V Vrtcu Ptuj že vrsto let izvajamo nadstandardna programa Igre na snegu in Igre v vodi za otroke, ki so stari od 5 do 6 let. Igre v vodi in Igre na snegu sta nadstandardna programa, ki ju izvajajo zunanji izvajalci, ki jih izberemo glede na razpis in ju v celoti plačajo starši. Iger v vodi se udeleži večina otrok, katerim je nadstandardni program ponujen, medtem ko Iger na snegu bistveno manj, vendar je število otrok v porastu, ampak še zmeraj bistveno manj kot tistih otrok, ki se udeležijo Iger v vodi. Cilj pridobljenih podatkov iz anketnega vprašalnika je bil, da potrdim oziroma ovržem predvidevanje, da se starši ne odločajo za nadstandardne športne aktivnosti v Vrtcu Ptuj zaradi previsoke cene ponudnika, predvsem pri Igrah na snegu, čeprav imajo tako rekoč skoraj vsi doma pametni telefon oziroma računalniško tablico. Iz pridobljenih rezultatov je tako mogoče sklepati, da starši raje dajo več denarja za sodobno tehnologijo (»igro«), ki otrokom ne nudi celostnega razvoja, temveč so mnenja, da otroci to potrebujejo, ker živimo v času računalništva, ki se razvija s svetlobno hitrostjo, hkrati pa zanemarjajo »primarno potrebo človeka in to je – gibanje« (Bahovec, 1999).

Metode. S pomočjo anketnega vprašalnika, ki smo ga izvedli med starši otrok, katerim sta bila ponujena oba nadstandardna programa, smo ugotovili, zakaj se starši ne odločajo za nadstandardni program Igre na snegu. Anketni vprašalnik je prejelo 238 staršev, 198 pa jih je bilo vrnjenih oziroma pravilno izpolnjenih.

Ugotovitve. Predvidevali smo, da starši svojih otrok ne prijavijo na nadstandardni program Igre v vodi zaradi tega, ker so njihovi otroci že prilagojeni na vodo, kar so tudi potrdili. To pomeni, da potopijo glavo pod vodo in znajo drseti na vodi. Medtem, ko starši otrok, ki svojih otrok ne prijavijo na nadstandardni program Igre na snegu, tega ne storijo zaradi previsoke cene, čeprav imajo doma ali tablični računalnik ali pametni telefon. S tem smo potrdili naša predvidevanja, da je staršem prioriteta sodobna tehnologija, medtem ko denarja za Igre na snegu nimajo.

Zaključek. Dejstvo je, da se cene nadstandardnih programov bistveno razlikujejo. Nadstandardni program Igre v vodi je tudi do 4-krat cenejši od nadstandardnega programa Igre na snegu. Cena prvega znaša 32,50 EUR, cena Iger na snegu pa je lani znašala 135 EUR, letos sicer 20 EUR manj, torej

115 EUR. Za starše predstavlja izdatek ključno težavo, saj v celoti plačajo oba nadstandardna programa, ki ju ponuja Vrtec Ptuj.

Ključne besede: celostni razvoj otroka, gibanje, osnove smučanja (spuščanje, vijuganje, zaustavitvev), prilagajanje na vodo, šport.

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SPORT GAMES WITH A DOG

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Basis. Various studies have shown that family dogs have a positive impact on the motoric, cognitive and psychosocial development of children. It was precisely these beneficent impacts that I wanted to take advantage of while working with my students with special needs. I included my dog Alvin in the curriculum and currently we are a therapeutic pair at Slovenian society for animal assisted therapy – "Ambassadors of smile". In this way, at CIRIUS Kamnik, we have been very successful in conducting a project entitled "Therapy dog in class". Sport games with a dog is one of the learning activities that formed and developed during the course of the project.

Problem. Already during their initial and primary development, severely mobility-impaired children are deprived of numerous experiences that healthy children are able to gain while touching objects, climbing, exploring the environment, playing various games, etc. However, regardless of their constraints, they like to move and play and they enjoy doing that. It is a common feature of human beings and animals that they enjoy playing. I teach students with mental disorders who have to cope with a severe level of mobility impairment and difficult speech-language disorders. For them it is typical that they need a permanent stimulation for their personal growth. I foresaw that the dog would assume a considerable part of the stimulation, which is at school usually assumed by a teacher. By including a therapy dog within the domain of movement and physical education, we set ourselves a goal to enable students to become more active in developing their motoric and sensory functions.

Methods: in the physical education lessons with the dog, 12 students from two departments of the special program were included. The canine-assisted activities involving movement and sport, were adjusted to the abilities of the students and the dog. The 7-year old dog named Alvin of the border collie breed is keen on learning and is also very guidable and really loves playing

with children. I took advantage of all these traits while conducting my work. I carefully chose the type of the sport activity and all the appropriate requisites. We used different balls, balloons, various types of hurdles, a hula hoop, a jump rope and pit pillows. We also danced. The sport games with the dog took place on a regular basis, one session per week in the gym facilities. Alvin executed the role of the motivator to perfection and encouraged students to increase the level of their involvement. He got used to working with the students who were using either manual or electrically powered wheelchairs. At the start of the session, the dog was happy to greet the students and he subsequently accompanied and responded while they were taking part in their activities. In this way, everyone felt desired, accepted and important. Students displayed the positive emotions of happiness and contentment while partaking in the activities.

Findings. The inclusion of the dog in the curricular activities has provided for a positive and soothing influence and the carefully selected activities encouraged the overall student activity and simultaneously made it possible to achieve the goals that had initially been set. As a "living element" with his endless energy and friendly character, Alvin carried out the role of the motivator and encouraged the students to increase the level of their involvement. Because of the presence of the dog, students tried even harder and were also more persistent. They viewed their relationship with the dog as being personally important to them and hence they wanted to cooperate with him. They expressed positive emotions, followed the instructions and were motivated to work.

Conclusion. Including the appropriately trained therapy dog in various educational activities, which are not solely limited to the domain of movement and sport, brings opportunities for new didactical approaches in educating students with special needs. An appropriately trained dog can assume the role of a great working partner of the teacher and can in this way co-create a relaxed, conducive and unique environment.

Key words: a therapeutic dog, mobility-impaired children, mental disorder, sports activity.

ŠPORTNE IGRE S PSOM

Izhodišča. Različne raziskave dokazujejo, da družinski psi spodbudno vplivajo na motorični, kognitivni in psihosocialni razvoj otroka. Prav te ugodne vplive sem želela izkoristiti pri svojem delu z učenci s posebnimi potrebami. V učni proces sem vključila svojega psa Alvina, s katerim sva terapevtski par pri Društvu za terapijo s pomočjo živali – Ambasadorji nasmeha. Tako v CIRIUS Kamnik že pet let zelo uspešno izvajamo projekt Terapevtski pes v razredu. Ena od učnih dejavnosti, ki se je v projektu oblikovala in razvila, so športne igre s psom.

Problem. Težko gibalno oviran otrok je že v primarnem razvoju okrnjen za mnoge izkušnje, ki jih zdrav otrok pridobiva ob prijemanju predmetov, plazenju, raziskovanju okolice, ob različnih igrah ... Kljub temu se rad giba, igra in v tem uživa. Veselje do igre je skupna značilnost človeka in živali. Poučujem učence z motnjo v duševnem razvoju, ki so težko gibalno ovirani ter imajo težko govorno-jezikovno motnjo. Značilno zanje je, da za svoj osebni razvoj potrebujejo neprestano stimulacijo. Predvidela sem, da bo pes prevzel velik del te stimulacije, ki jo v šoli nosi predvsem učitelj. Z vključitvijo terapevtskega psa na področju gibanja in športne vzgoje smo si zastavili cilj, da bodo učenci s pomočjo psa bolj aktivni pri razvijanju gibalnih spretnosti in sensorike.

Metode. V športne ure s psom je bilo vključenih 12 učencev iz dveh oddelkov posebnega programa. Gibalno-športne aktivnosti s psom smo prilagajali zmoglostim učencev in tudi psa. Pes Alvin, sedemletni border collie, je zelo učljiv, vodljiv, zelo rad se igra z otroki. To sem koristila pri svojem delu. Skrbno sem izbirala vrsto gibalno-športne aktivnosti in športne rekvizite. Uporabljali smo različne žoge, balone, elemente za poligon, obroč, kolebnico in blazine. Tudi plesali smo. Športne igre s psom so se izvajale redno, eno uro na teden v prostorih telovadnice. Alvin je vlogo motivatorja in demonstratorja odlično izvajal in spodbujal učence k večji aktivnosti. Navadil se je na delo z učenci na vozičkih na ročni in elektromotorni pogon. Učence je na začetku ure z veseljem pozdravil ter jih nato aktivno spremljal ter se odzival ob njihovih aktivnostih. Tako se je vsak počutil zaželenega, sprejetega in pomembnega. Učenci so pri aktivnostih izražali čustva veselja in zadovoljstva.

Ugotovitve. Vključitev psa v šolski proces je dosegla pozitiven in sproščujoč vpliv, skrbno izbrane dejavnosti pa so spodbujale celostno aktivnost učencev ter s tem realizacijo zastavljenih ciljev. Alvin je kot »živ element« s svojo neizmerno energijo in prijaznim značajem nosil vlogo motivatorja in spodbujal učence k večji aktivnosti. Zaradi psa so se učenci bolj potrudili in bili vztrajnejši. Odnos s psom jim je postal osebno pomemben, želeli so si sodelovanja z njim. Izražali so pozitivna čustva, sledili so navodilom in bili motivirani za delo.

Zaključek. Vključitev primerno šolanega, terapevtskega psa v različne učne dejavnosti, ne le na področju gibanja in športne vzgoje, odpira nove didaktične pristope v vzgoji in izobraževanju učencev s posebnimi potrebami. Primerno šolan pes je lahko odličen učiteljev delovni partner, ki soustvarja sproščeno, spodbudno in edinstveno okolje.

Ključne besede: terapevtski pes, gibalno oviran učenec, motnja v duševnem razvoju, gibalno-športna aktivnost.

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MOTIVATING CHILDREN AND YOUNGSTERS FOR ALPINE SKIING

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In the Residential Treatment Institution Kranj we put special emphasis on physical activities of children and youngsters. Every winter we take a group of children and youngsters who are diagnosed with behavioural and emotional disorders and live in different Community Homes, to a five-day winter camp. Motivation for work, learning and changes in the way of life present a big problem for children living in Residential Treatment Institution. In this paper a program of teaching alpine skiing is presented, as well as the problems which may arise in implementing it. The main problem is how to motivate children and youngster for alpine skiing. The teacher needs to have a lot of professional and pedagogic knowledge. There are various strategies chosen by the teacher to raise children's motivation. In such case it is essential that the teacher chooses the motivation method that will encourage child's inner motivation and consequently, better performance. This paper points out the basics for teaching skiing, as well as suggests didactic strategies and methods. In conclusion, we give some examples of practical experience and some suggestions for further improvement. Eventually, positive influence of skiing on personal growth and physical development of children is presented.

Key words: physical activity, emotional and behavioural disorders, Residential Treatment Institution, strategies

MOTIVIRANJE OTROK IN MLADOSTNIKOV ZA UČENJE ALPSKEGA SMUČANJA

V vzgojnem zavodu Kranj dajemo velik poudarek gibanju otrok in mladostnikov. Vsako zimo odpeljemo na petdnevno zimovanje skupino otrok in mladostnikov iz vseh stanovanjskih skupin, ki delujejo v okviru Vzgojnega zavoda Kranj. Otroci in mladostniki so opredeljeni kot otroci z motnjami vedenja in čustvovanja. Motivacija za delo, učenje in za spremembe v življenju so velika težava otrok in mladostnikov iz vzgojnih zavodov. Namen prispevka je predstaviti program učenja alpskega smučanja in težave, s katerimi se srečujemo pri njegovem izvajanju. Največji problem je, kako motivirati otroke z motnjami vedenja in čustvovanja za učenje alpskega smučanja. Poučevanje smučanja zato od učitelja zahteva veliko strokovnega znanja in izkušenj. Biti mora pedagoško naravnano in mora poznati osnovna didaktična načela za učinkovito učenje smučanja. Strategije, ki jih učitelj izbere za dvig motivacije otrok, so zelo različne. Pomembno je, da poskuša izbrati metode motiviranja, ki bodo pri otroku spodbudile notranjo in storilnostno motivacijo. Predstavljene so pedagoško-didaktične osnove pri poučevanju smučanja in metode ter didaktične strategije učenja. Podane so tudi ugotovitve dosedanjih izkušenj in predlogi za izboljšanje motivacije za učenje smučanja. V zaključku predstavljamo pozitivne vplive smučanja na osebni in gibalni razvoj otrok.

Ključne besede: gibanje, čustvene in vedenjske motnje, vzgojni zavod, strategije

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DEVELOPMENT OF SOCIAL SKILLS THROUGH SPORTS ACTIVITIES

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The value system of the individual has considerably changed recently. This can be noticed in the society attitude to various problems and events. It is important that teachers, who have a direct and indirect impact on the development of children's value systems, are aware of their role and through various activities, among which an important place is sport, they enable the child to optimally develop social skills. The curriculum itself also suggests that pupils form positive behavioral patterns (perseverance, self-confidence, mutual cooperation and help, tolerance, acceptance of difference, respect for sporting behavior, etc.). With sporting contents we do not only guarantee the satisfaction of the pupil's need for movement and play, but also the acquisition of a number of movement skills and knowledge, as well as the emotional perception of sport as an activity and individuals participation in certain sports activities. Movement activity therefore plays an important role in the process of healthy integration of young people into society, as it develops and strengthens working habits, educates children for life in the community, influences the children's image of their own physical abilities and their self-image.

An important role in promoting mutual assistance and building trust among the participants has various team, relay and other group games. In this kind of activity, we need to maintain and promote a positive relationship between the participants. Therefore a good educator is someone who presents the purpose of the game to the participants in the right way.

In the article I present an example of good practice how to influence on positive behavioral patterns of students through a group game. In the school year 2016/17 we carried out a project of the School Sports Olympiad. The main purpose of the project was to develop positive behavioral patterns of students through group games. We organized several sports activities that

encouraged the integration of pupils from different classes, grades (grades 4 and 5) and schools. The project also included students' parents. At the end of the project we also hosted three top athletes from different sports fields who presented us their experience. With the slogan "It is nice to win, it is even better to work together, but the best is to grow fond of the game!" we promoted a positive sports spirit that included compassion for physically less competent children, a fair play attitude among players and mutual respect among all sports participants. Through observation and feedback from the participants I believe that the project was successful and had positive effects, therefore we will continue to upgrade it in the future.

Key words: social skills, sports activities, the role of the teacher, group games

RAZVOJ SOCIALNIH VEŠČIN PREKO ŠPORTNIH AKTIVNOSTI

Vrednostni sistem posameznika se je v zadnjem času precej spremenil. To lahko opazimo v odzivanju družbe na različne probleme in dogodke. Pomembno je, da se učitelji, ki imamo posreden in neposreden vpliv na razvoj vrednostnih sistemov otrok, zavedamo svoje vloge in preko različnih dejavnosti, med katerimi ima pomembno mesto tudi šport, omogočimo otroku optimalen razvoj socialnih veščin. Tudi učni načrt med drugim predvideva, da učenci oblikujejo pozitivne vedenjske vzorce (vztrajnost, samozavest, medsebojno sodelovanje in pomoč, strpnost, sprejemanje drugačnosti, spoštovanje športnega obnašanja idr.). S športnimi vsebinami torej ne zadovoljujemo zgolj učenčeve potrebe po gibanju in igri ter ne omogočamo le pridobivanja številnih gibalnih spretnosti in znanj, ampak privzgjajamo tudi čustveno dožemanje športa kot dejavnosti in sodelujočih pri določeni športni aktivnosti. Gibalna dejavnost ima v procesu zdravega vključevanja mladih v družbo pomembno vlogo, saj razvija in krepi delovne navade, vzgaja otroke za življenje v skupnosti, vpliva na otrokovo predstavo o lastnih gibalnih možnostih ter na predstavo o samem sebi.

Pomembno vlogo pri spodbujanju medsebojne pomoči in krepitvi zupanja med sodelujočimi imajo različne moštvene, štafetne in druge skupin-

ske igre. Pri tovrstnih aktivnostih moramo ohranjati in spodbujati pozitiven odnos med udeleženci. Dober pedagog je torej tisti, ki udeležencem pravilno predstavi namen igre oz. tekmovanja.

V prispevku predstavljam primer dobre prakse, kako preko skupinske igre vplivati na pozitivne vedenjske vzorce učencev. V šolskem letu 2016/17 smo na šoli izvedli projekt Šolske športne olimpijade. Osnovni namen projekta je bil razvijanje pozitivnih vedenjskih vzorcev učencev preko skupinskih iger. Organizirali smo več športnih dejavnosti, s katerimi smo spodbujali povezovanje med učenci iz različnih oddelkov, razredov (4. in 5. razred) in šol. V projektu so med drugim sodelovali tudi starši učencev, ob zaključku projekta pa smo gostili tudi tri vrhunske športnike iz različnih športnih področij, ki so nam zaupali svoje izkušnje. S sloganom »Lepo je zmagati, še lepše je sodelovati, najlepše pa je igro vzljubiti!« smo spodbujali pozitiven športni duh, ki je vključeval sočutje do gibalno manj kompetentnih otrok, »fair play« odnos med igralci in medsebojno spoštovanje med vsemi športnimi udeleženci. Preko opazovanja in povratne informacije udeležencev ocenjujem, da je bil projekt uspešen in je imel pozitivne učinke, zato ga bomo v bodoče še nadgrajevali.

Ključne besede: socialne veščine, športne dejavnosti, vloga učitelja, moštvene igre

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CAMP FOR CHILDREN AND ADOLESCENTS WITH LEARNING AND PSYCHO-SOCIAL DIFFICULTIES

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The article talks about a 3-day camp for children and adolescents from the 5th to the 8th class in Javorniški Rovt nad Jesenicami that has been organised consecutively for 8 years at OŠ Naklo. Each year approximately 20 children are invited to this camp. The camp is organised and executed by the school's team of three special education teachers and a psychologist. We, namely, found out that the number of children and adolescents, who had been treated and monitored in our team, increased each year. We also found out that the traditional ways, strategies and methods of learning, teaching and upbringing weren't so effective anymore. Therefore, we started searching for solutions in alternative ways of upbringing and education. Namely, all people involved in the educational process greatly influence on the self-image of the students with our relation to them. Occasionally we also have a key role in their later development in life, influencing them to develop into personally and socially responsible self-confident persons who are going to successfully confront challenges in their lives. The program of the described camp had been formed for this purpose. The camp is meant for children and teens with problems and difficulties in the field of feelings, behaviour or integration among their peers that differ from the usual, according to their developmental stage. The camp is also suitable for those who have problems at school or at home, are overwhelmed with their appearance, academic success or have other psychological difficulties. The common thread of the program is elements of nature-sportive experiential pedagogics. We also supplement it with indoor pedagogic activities. Nature-sportive activities on the water (a canoe ride) and on the land (climbing on a climbing wall, archery and hiking) are executed in cooperation with outworkers to ensure the safety of all the participants. The indoor activities are executed by our team and are adjusted yearly according to the specifics of the group of students. We prepare various socially interactive (werewolves) and creative workshops (making para-

cord bracelets) as well as social games (Minute to win). The program focuses on prevention and is meant for early handling of children and adolescents with various difficulties. With the early handling, children and adolescents are offered the needed support on their path of personal maturing and thus development of various disorders is prevented. The goals of this cap are: experiencing different adventures, establishing appropriate social relations (communication, trust, co-operation), developing the sense of equal responsibility and establishing a noninstitutional relation between teachers and students. The results of 8-year planned work indicate that the number of negative school marks has decreased, the number of disciplinary measures and the psychosomatic problems in risky pupils have also decreased. The students have improved in the field of emotional and social intelligence, their satisfaction with school, and consequently their academic success. We believe that the key to success is an intensely strong relationship between the students and us that develops during this camp. With our constant presence, we accomplish greater reliability and the feeling of obligation in students during this camp than we could in the classic school environment. This contributes to firmer pedagogic and personal relations.

Key words: prevention, experiential pedagogics, emotional intelligence, social intelligence

TABOR ZA OTROKE IN MLADOSTNIKE Z UČNIMI IN PSIHOSOCIALNIMI TEŽAVAMI

V prispevku je predstavljen tridnevni tabor za otroke in mladostnike od 5. do 8. Razreda v Javorniškem Rovtu nad Jesenicami, ki ga v Osnovni šoli Naklo organiziramo že osmo leto zapored. Vsako leto na tabor povabimo približno dvajset otrok. Tabor organiziramo in izvedemo zaposleni šolske svetovalne službe, ki jo sestavljamo tri specialne pedagoginje in psiholog. Ugotavljali smo namreč, da se je število otrok in mladostnikov, ki so bili obravnavani in spremljani v šolski svetovalni službi, iz leta v leto povečevalo. Prav tako smo zaznavali, da klasične oblike, strategije, metode učenja, poučevanja in vzgajanja niso bile več učinkovite, zato smo začeli iskati rešitve v alternativnih oblikah vzgoje in izobraževanja. Zaposleni v vzgoji in izobraževanju

namreč s svojim odnosom do učencev in tudi z zgledom pomembno vplivamo na njihovo samopodobo in imamo včasih ključno vlogo pri tem, ali se bo otrok kasneje v življenju razvil v osebno in družbeno odgovorno ter samozavestno osebo in se bo uspešno soočal z izzivi, ki mu jih prinaša življenje. V ta namen smo oblikovali program tabora, ki je namenjen otrokom in mladostnikom s težavami na področju čustvovanja, vedenja ali vključevanja v vrstniško skupino, ter z odklonom/zaostankom v razvoju. Primeren je tudi za tiste, ki imajo težave v šoli ali doma, so preobremenjeni s svojo zunanjo, učnim uspehom ali imajo druge težave psihološke narave. V zadnjih letih rdečo nit programa predstavljajo elementi športnodoživljajske pedagogike, ki jih dopolnjujemo s pedagoškimi dejavnostmi v zaprtih prostorih. Naravnošportne dejavnosti na vodi (vožnja s kanuji) in kopnem (plezanje po umetni plezalni steni, lokostrelstvo, pohodništvo) izvajamo skupaj z zunanjimi strokovnjaki, da zagotovimo varnost vseh udeležencev. Dejavnosti v zaprtem prostoru izvajamo sami in jih iz leta v leto prilagajamo posebnostim ciljne skupine. Pripravimo različne socialnointerakcijske (volkodlaki) in ustvarjalne delavnice (izdelovanje zapestnic iz padalske vrvi) ter družabne igre (minuta do zmage). Program je preventivno usmerjen in je namenjen zgodnji obravnavi otrok in mladostnikov z različnimi stiskami. Z zgodnjo obravnavo otroke in mladostnike podpiramo na poti njihovega osebnostnega dozorevanja in tako preprečimo razvoj različnih motenj. Cilji tabora so: izkusiti različna doživetja, vzpostaviti ustrezne socialne odnose (komunikacijo, zaupanje, sodelovanje), razviti občutek soodgovornosti in vzpostaviti neinstitucionalen odnos učenec-učitelj. Rezultati osemletnega načrtnega dela kažejo, da se je posledično zmanjšalo število negativnih ocen, število vzgojnih ukrepov, upadle so tudi psihosomatske težave pri rizičnih učencih. Učenci so napredovali na področju čustvene in socialne inteligentnosti, povečalo se je njihovo zadovoljstvo s šolo in posledično šolski uspeh. Menimo, da je ključ do uspeha izredno močan odnos, ki se med taborom oblikuje med nami in skupino otrok. Z našo stalno navzočnostjo dosežemo večjo zanesljivost in občutek dolžnosti pri otrocih kot v klasični šolski strukturi. To pa pripomore k večji stalnosti pedagoških in osebnih odnosov.

Ključne besede: preventiva, doživljajska pedagogika, socialna inteligenca, čustvena inteligenca

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ADJUSTMENT OF NATIONAL SPORTS PROGRAMES LITTLE SUN, GOLDEN SUN, KRPAN AND LEARNING TO SWIM FOR MOTOR IMPAIRED CHILDREN

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Physical activity is an important factor in the care of health and the way of quality leisure time. Educational and local environments offer a wide range of sports activities, but they are largely intended for the majority of children and adolescents, less the population of children and adolescents with physical disability. Therefore, the project group CIRIUS Kamnik joined the international project Active, Healthy, Satisfied - the project of integrating disabled people in sport and sports organizations with the aim of reducing health inequalities. Within the project, we prepared adjustments to the national sports programs Mali sonček, Zlati sonček, Krpan and Learn how to swim intended for physically handicapped children and adolescents in the age group from 2 to 14 years of age. In terms of physical impairment, we distinguish children with a lighter, moderate, heavier and more difficult degree of physical obstruction, which served as a criterion for adjusting tasks to four versions. At the same time, we took into account the goals of physical activity. The proposed general adjustments are a shorter distance, a shorter time for carrying out an individual task, a smaller number of replicates, the use of sports accessories with which a physically handicapped individual can manipulate. In the event that a student can not complete a task, a replacement task is available. The tasks can be performed with the help of a teacher, a sports pedagogue or a companion. In the framework of the project, an e-manual was published with a detailed description of how to perform adapted sports activities for teachers in majority schools, where students with mobility disabilities are involved, and a booklet for recording tasks performed for pupils. At the end of the project, we found that with adapted tasks we enabled children and youth with physical disability to have the opportunity to participate equally in national sports programs in kindergarten and ele-

mentary school. We want sports activities for individuals with mobility disabilities to be enabled in local communities in the time they spend at home, which could be realized through the integration of the local community and special institutions. We see this as a long-term goal, which will need to be realized in the future.

Key words: motor impairment, sports programs, adjustments

PRILAGODITEV NACIONALNIH ŠPORTNIH PROGRAMOV MALI SONČEK, ZLATI SONČEK, KRPAN IN NAUČIMO SE PLAVATI ZA OTROKE V MOTNJO V GIBALNEM RAZVOJU

Telesna aktivnost je pomemben dejavnik pri skrbi za zdravje in način kvalitetnega preživljanja prostega časa. Izobraževalna in lokalna okolja nudijo široko paleto športnih dejavnosti, vendar so v veliki meri namenjena večinski populaciji otrok in mladostnikov, manj populaciji otrok in mladostnikov z gibalno oviranostjo. Zato se je projektna skupina CIRIUS Kamnik pridružila mednarodnemu projektu Aktivni, zdravi, zadovoljni - projekt integracije invalidov v šport in športne organizacije z namenom zmanjševanja neenakosti v zdravju. V sklopu projekta smo pripravili prilagoditve nacionalnih športnih programov Mali sonček, Zlati sonček, Krpan in Naučimo se plavati namenjene gibalno oviranim otrokom in mladostnikov v starostni skupini od 2. do 14. leta starosti. Glede na gibalno oviranost razlikujemo otroke z lažjo, zmerno, težjo in težko stopnjo gibalne oviranosti, kar nam je služilo kot kriterij za prilagoditve nalog na štiri izvedbene različice. Hkrati smo v največji možni meri upoštevali cilje telesnih aktivnosti. Predlagane splošne prilagoditve so krajša razdalja, krajši čas izvedbe posamezne naloge, daljši odmori, manjše število ponovitev, uporaba športnih pripomočkov, s katerimi gibalno ovirani posameznik lahko manipulira. V primeru, da učenec naloge ne more opraviti, je na voljo zamenjalna naloga. Naloge lahko opravi ob asistenci učitelja, športnega pedagoga ali spremljevalca. V okviru projekta je bil izdan e-priročnik s podrobnim opisom načina izvajanja prilagojenih športnih aktivnosti, namenjen učiteljem v večinskih šolah, kamor se gibalno ovirani učenci vključujejo, ter knjižica za beleženje opravljenih nalog, namenjena učencem. Ob zaključku projekta smo ugotovili, da smo s prilagojenimi nalogami omo-

gočili otrokom in mladostnikom z gibalno oviranostjo možnost enakovrednega sodelovanja v nacionalnih športnih programih v vrtcu in osnovni šoli. Želimo si, da bi se športne aktivnosti posameznikom z motnjo v gibalnem razvoju omogočile tudi v lokalnih skupnostih v času, ki ga preživljajo doma, kar bi lahko uresničili s povezovanjem lokalne skupnosti in specialnih ustanov. To vidimo kot dolgoročni cilj, ki ga bo potrebno realizirati v prihodnosti.

Ključne besede: gibalna oviranost, športni programi, prilagoditve

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»AS MY HANDS AND LEGS ARE IN MOVEMENT, MY BRAIN IS AWAKE AS WELL«

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In the article, we want to show how the planned and selected exercises can improve the attention of the child, which in a larger extent depends on the child's sensation and perception of stimulations from the environment, which also have a significant influence on the child's motor development.

In the observed group we included children who, due to the observed behaviors and smaller backlogs in development, find it more difficult to successfully integrate into the entire daily activities of the kindergarten. Some of these children are directed to a program for pre-school children with adapted exercise and additional professional help as children with easier mobility impediments. It is important that in the pre-school period, we pay close attention to the child's motor development and to its response to individual stimulations in the environment. In observing children, we paid special attention to certain behaviors that occurred over a longer period of time (half a year), such as: movement disorder, impulsivity, irritability or withdrawal from a group of peers into an isolated game, a jittery, poorer concern for oneself, nutrition problems, crossings of the activities, etc. We were also careful about the basic forms of movement in: walking on uneven terrain, running, dressing, sitting, walking down stairs, using and choosing play tools, etc. We were also careful about the basic forms of movement in: walking on uneven terrain, running, dressing, sitting, walking down stairs, using and choosing play, etc. Due to the beforementioned poorly developed skills in individuals, we have in three groups of five and six year old, started implementing selected exercises according to the so called HANDLE (Holistic Approach to NeuroDevelopment and Learning Efficiency) approach, which has been undertaken with the aim of influencing the better well-being and inclusion of children in the preschool environment. All of the abovementioned behaviors were a sufficient reason to start with the planned observation and recording

of children's abilities by curricular fields, which were collected in a questionnaire, which we completed three times a year. We have deepened our cooperation with parents of children, where we have noticed lesser skills in the field of movement and inclusion in the daily activities of the kindergarten. Depending on the perceived abilities and behaviors of an individual, we selected certain exercises and tools after the HANDLE approach. Some exercises were later performed together with the whole group, some with a small group of observable children or individually with individuals. In carrying out exercises and adjustments we used methods of observation, demonstration, playful dialogue, explanation, promotion and conversation. The main purpose of the exercises was above all to influence better interhemispheric integration, which enables a better focus on activity. With individual exercises, children also strengthened basic sensory systems. With the regular, everyday input of exercises, adjustments and tools, we achieved better cooperation between children at the time of the transitions and in the activities that demanded longer attention, and consequently there was a better general feeling and less disturbing behavior. Similarly, exercises positively influenced the attention of all other children in the group - the group climate improved.

By understanding the occurrence of certain behaviors and performing simple exercises during the day, which do not take a lot of time, we can greatly contribute to keep our brains longer "awake" and more satisfied, whether in kindergarten, school, or service.

Key words: attention, learning, motor development, disturbing behavior.

KO MOJE ROKE IN NOGE GIBAJO, SO BUDNI TUDI MOJI MOŽGANI

V prispevku želimo prikazati, kako lahko z načrtovanimi in izbranimi vajami izboljšamo pozornost pri otroku, ki je v veliki meri odvisna od otrokovega občutenja in zaznavanja dražljajev iz okolja, kar pomembno vpliva tudi na otrokov gibalni razvoj.

V opazovano skupino smo zajeli otroke, ki se zaradi opaženih vedenj in manjših zaostankov v razvoju težje uspešno vključujejo v celotno dnevno dogajanje vrtca. Nekateri od teh otrok so usmerjeni v program za predšolske

otroke s prilagojenim izvajanjem in dodatno strokovno pomočjo kot lažje gibalno ovirani otroci. Pomembno je, da smo v predšolskem obdobju dovolj zgodaj pozorni na otrokov gibalni razvoj in na njegova odzivanja na posamezne dražljaje v okolju. Pri opazovanju otrok smo bili pozorni predvsem na določena vedenja, ki so se pojavljala v daljšem časovnem obdobju (pol leta) kot so: gibalni nemir, impulzivnost, razdražljivost ali umikanje od skupine vrstnikov v osamljeno igro, jokavost, slabšo skrb zase, težave pri hranjenju in ob prehodih dejavnosti itd. Pozorni smo bili tudi na osnovne oblike gibanja pri: hoji po neravnem terenu, teku, oblačenju, sedenju, hoji po stopnicah, uporabi in izbiri igral itd. Zaradi zgoraj omenjenih slabše razvitih spretnosti pri posameznikih, smo v treh skupinah pet do šest letnih otrok pričeli z izvajanjem izbranih vaj po pristopu HANDLE (Holistic Approach to NeuroDevelopment and Learning Efficiency), z namenom vplivanja na boljše počutje in vključevanje otrok v okolje vrtca. Vsa zgoraj naštetá vedenja so bila zadosaten razlog, da smo pričeli z načrtnim opazovanjem in beleženjem otrokovih sposobnosti po kurikularnih področjih, ki so bila zbrana v vprašalniku, katerega smo izpolnili trikrat letno. Poglobili smo sodelovanje s starši otrok, pri katerih smo opazili slabše spretnosti na področju gibanja in vključevanja v dnevno dogajanje vrtca. Glede na opažene sposobnosti in vedenja pri posamezniku smo izbrali določene vaje in pripomočke po pristopu HANDLE. Nekatere vaje smo kasneje izvajali skupaj s celotno skupino, nekatere pa z manjšo skupino opazovanih otrok ali individualno s posamezniki. Pri izvajanju vaj in prilagoditev smo se posluževali metode opazovanja, demonstracije, igrivega dialoga, razlage, spodbujanja in pogovora. Osnovni namen vaj je bil predvsem vplivati na boljšo interhemisferno integracijo, ki omogoča boljšo osredotočenost na aktivnost. S posameznimi vajami so otroci krepili tudi osnovne senzorne sisteme. Z rednim, vsakodnevnim vnašanjem vaj, prilagoditev ter pripomočkov smo dosegli boljše sodelovanje otrok med samimi prehodi in pri dejavnostih, ki so zahtevale daljšo usmerjeno pozornost, posledično je bilo opaziti tudi boljše splošno počutje in manj motečega vedenja. Prav tako so vaje pozitivno vplivale na pozornost pri vseh drugih otrocih v skupini – izboljšala se je skupinska klima.

Z razumevanjem pojava določenih vedenj in z izvajanjem enostavnih vaj tekom dneva, ki časovno ne vzamejo veliko časa, lahko v veliki meri pripomoremo, da ohranjamo naše možgane dlje časa »budne« in bolj zadovoljne, pa naj bo to v vrtcu, šoli ali službi.

Ključne besede: pozornost, učenje, gibalni razvoj, moteče vedenje.

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THE IMPACT OF SENZOMOTORIC DEVELOPMENT ON CHILDREN'S SOCIAL COMPETENCE

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In the pre-school period, movement is one of the essential elements that affects all other areas of the child's development, both on cognitive, physical, emotional and social development. Movement is the tool through which the child learns about himself and the environment, enters the world of the game through which he learns and acquires social competence

We notice that in kindergarten we are more and more likely to encounter children who find it difficult to get involved in playing with their peers, when they perform basic forms of movement they seem clumsy and over-or under-react to certain environmental stimulations.

We were interested in whether with the planned and systematic implementation of activities that enable the experiencing of given content by a certain sequence of selected activities, from the simplest to the more complex, whether we can influence the involvement of children in the whole activity. We have observed children aged from 5 to 6 in two separate groups, by which we observed a worse sensory response. We conducted observation twice a week, thru the school year. In the first group, the content of curricular activities was carried out in a certain sequence of individual activities, which were based on the basic guidelines of Sensory Integration Pedagogy and DIR/Floortime. The course was followed by the first activities influencing the neurological foundations of the child's sensory systems (vestibular, tactile and proprioceptive systems), followed by activities that required the integration of a higher level of balance, eye coordination, followed by calming and transition. On the activity in which children developed fine-tuning skills alone or with their peers. Each activity has also been enriched with a song or story on a specific content. The second group of children was observed in the activities that were given by the educators according to established pedagogical methods and approaches.

When planning activities of the first group, we took into account the method of observing individual children, based on which we made the necessary minor adjustments for individual children, while in the implementation of activities, we used the method of demonstration, playful dialogue, repetition, explanation and conversation.

We have found that the children from the first group, have already in the second half of the year, integrated more successfully in the entire course of guided activities. Cooperation with peers in activities was improved, compared to another group of children who needed more guidance and help from adults during the course of their activities. Similarly, the first group of children at the end of the school year had better inclusion in all other kindergarten activities and more successful involvement in free play. Harmonized movement and sensory development enables more possibilities for the successful performance of more complex motive and cognitive tasks, such as fine-tuning activities, listening, arranging, restoring the experienced, which represents the essential elements of the children's game during this period.

Key words: sensory development, kindergarten, social skills, motor development, peers.

VPLIV SENZOMOTORIČNEGA RAZVOJA NA SOCIALNO KOMPETENTNOST OTROKA

V predšolskem obdobju je gibanje eden bistvenih elementov, ki vpliva na vsa ostala področja otrokovega razvoja, tako na kognitivni, telesni, kot čustveni in socialni razvoj. Gibanje je tisto orodje, s katerim otrok spoznava sebe in okolje, vstopa v svet igre, preko katere se uči in pridobiva na socialni kompetentnosti.

Opažamo, da se v vrtcu vse pogosteje srečujemo z otroci, ki se težje vključujejo v igro z vrstniki, pri izvajanju osnovnih oblik gibanja so videti nespretni in se pretirano ali premalo odzivajo na določene dražljaje v okolju.

Zanimalo nas je, ali lahko z načrtovanim in sistematičnim izvajanjem dejavnosti, ki omogočajo doživljanje podane vsebine po določenem zaporedju

izbranih aktivnosti, od najenostavnejših do kompleksnejših izvedb, vplivamo na boljše vključevanje otrok v celotno dejavnost. Pri tem smo opazovali 5 do 6 let stare otroke v dveh ločenih skupinah, pri katerih smo opažali slabše senzomotorično odzivanje. Opazovanje smo izvajali 2x tedensko, eno šolsko leto. Pri prvi skupini je bila vsebina kurikularnih dejavnosti izvajana v določenem zaporedju posameznih aktivnosti, ki so temeljile na osnovnih smernicah Senzorno integracijske pedagogike in DIR/Floortime-a. Potek dejavnosti je sledil tako, da so prve aktivnosti vplivale na nevrološke temelje otrokovih senzornih sistemov (na vestibularni, taktilni in propioceptivni sistem), nato so sledile aktivnosti, ki so zahtevale vključevanje višjega nivoja ravnotežja, koordinacijo oko-roka, sledilo je umirjanje in prehod na aktivnost, pri kateri so otroci razvijali finomotorične spretnosti samostojno ali skupaj z vrstniki. Vsaka dejavnost je bila obogatena tudi s pesmico ali zgodbo na določeno vsebino. Drugo skupino otrok smo opazovali pri aktivnostih, ki so jih vzgojitelji podajali po ustaljenih pedagoških metodah in pristopih.

Pri načrtovanju dejavnosti prve skupine smo upoštevali metodo opazovanja posameznih otrok, na podlagi katere smo oblikovali potrebne manjše prilagoditve za posamezne otroke, pri sami izvedbi dejavnosti, pa smo uporabili metodo demonstracije, igrivega dialoga, prikazovanja s ponavljanjem, razlago in pogovor.

Ugotavljamo, da so se otroci iz prve skupine, že v drugi polovici leta veliko uspešneje vključevali v celoten potek vodenih dejavnosti. Izboljšalo se je sodelovanje z vrstniki pri aktivnosti, v primerjavi z drugo skupino otrok, ki so potrebovali tekom dejavnosti več usmerjanja in pomoči odraslega. Prav tako je bilo pri prvi skupini otrok ob koncu šolskega leta opaziti boljše vključevanje v vse ostale dejavnosti vrtca in uspešnejše vključevanje v prosto vrstniško igro. Usklajen gibalni in senzorni razvoj omogoča več možnosti za uspešno opravljanje kompleksnejših gibalnih in kognitivnih nalog, kot so finomotorične dejavnosti, poslušanje, dogovarjanje, obnavljanje doživetega, kar predstavlja bistvene elemente otroške igre v tem obdobju.

Z izvajanjem sistematično oblikovanih dejavnosti po zgoraj omenjenih pristopih in z upoštevanjem razvojnih posebnosti posameznikov, lahko omogočamo več možnosti za gradnjo usklajenega senzomotoričnega razvoja pri otroku. Na tak način bo vsak otrok lažje sodeloval v igri in se tako imel možnost razvijati v socialno kompetentnega otroka.

Ključne besede: senzorni razvoj, vrtec, socialne veščine, motorični razvoj, vrstniki.

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BE FIT BREAK ON PRIMARY SCHOOL DOLENJSKE TOPLICE

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Starting point. Movement is children's basic need. However, it is fulfilled less and less. Modern way of life takes away children and their parents' time to socialise and do sports activities. Even in schools, pupils spend most of the time before noon in school benches, and in the afternoon, playgrounds in settlements and near schools are often empty. Modern technology increasingly attracts them and steals their time for movement and spending time with their peers. At the moment, a computer game is more popular than playing tag or football on a school field. The youth use social network as a substitute for socialising with peers, often long into the night.

At our school, we offered Be fit break (BFB) as a counterbalance to negative trends of physical and motor development. We have been carrying it out for five years now, every day after the first school lesson. During this period, we have developed and updated it with the intention to motivate the pupils as much as possible to actively participate in it.

Problem. The results of Slo fit testing from 2010 have shown negative changes of physical characteristics and motor capabilities of pupils. Nowadays, children's body mass index is increasing, as well as their values of subcutaneous fat. At the same time, there is an increase in various chronic non-contagious diseases among the youth, i.e. obesity, diabetes, cardiovascular diseases. We noticed similar conditions at our school as well. Furthermore, the teachers have established that it is getting harder and harder for the younger pupils to calm down, and older pupils are often coming to school tired and sleepy. In short, the lifestyle of today's average child, youth, is calling out for the ones responsible for this area to take measures.

Methods. At our school, we sought for ways to stop this negative trend and turn it into the positive direction. We wanted to introduce the movement into the pupils' daily life. Therefore, in school year 2011/21 we decided to introduce the project Healthy life style. Besides that, we wanted to find me-

ans to additionally offer the pupils movement activities as a counterbalance to sitting in school benches.

We focused on activities that would encompass all pupils from 1st to 9th Grade. At first, we thought about a classical active break. Due to organisational problems and time limitations within the curriculum, the working group definitely decided that the movement break would be performed in classrooms, every day after the first lesson with opened windows, in accordance with a minute for health. We named the break Be fit break. Content of 5-minute movement break are strengthening and stretching exercises, cardio exercise and exercise for the brain – "braingym".

Findings. After one year of implementation of Be fit break, we used a questionnaire and asked pupils and teachers about acceptance and satisfaction with the performing of movement break. The analysis of the questionnaire has shown that majority have accepted BFB well. Younger pupils love to perform it and are more active. With older pupils, the teachers have to use more motivational steps for them to be active, but are more focused during classes after this break. After three years, there was again lack of motivation in performing the movement break. Therefore, we asked pupils and teachers about suggestions for change. Most of them wanted to add music to accompany the exercises. Since then, we perform BFB with projection of recorded exercises with accompanying music.

Conclusion. Be fit break presents one of steps at our school in preventing negative consequences of pupils' modern way of life and long-lasting sitting at school benches. At the same time, we are getting pupils accustomed to a healthy way of life by carrying out other projects (Healthy life style, Scheme of school fruit etc.). However, we have to take care of pupils not running out of motivation for movement. Thus, they challenge us to look for ever new content and way, manner of movement.

Key words: healthy way of life, active break, movement, pupils

BODI FIT ODMOR – GIBALNI ODMOR NA OŠ DOLENJSKE TOPLICE

Izhodišče. Gibanje je osnovna otrokova potreba. Vendar pa jo vse manj zadovoljujejo. Sodobni način življenja otrokom in njihovim staršem jemlje čas za druženje in športne aktivnosti. Tudi v šoli učenci velik del dopoldneva sedijo v šolskih klopeh, v popoldanskem času pa so igrišča v naseljih in ob šolah pogosto prazna. Sodobna tehnologija jih vse bolj privlači in jim kra-de čas za gibanje in druženje z vrstniki. Trenutno je računalniška igrice bolj popularna kot lovljenje ali nogometna igra na šolskem igrišču. Mladostniki socialna omrežja uporabljajo kot nadomestek medsebojnega druženja vrstnikov, pogosto tudi pozno v noč.

Na naši šoli smo učencem kot protiutež negativnim trendom telesnega in gibalnega razvoja ponudili Bodi fit odmor (BFO). Izvajamo ga že pet let, vsak dan po prvi šolski uri. V tem obdobju smo ga razvijali in posodabljali z namenom, da bi čim bolj motivirali učence za aktivno sodelovanje v tem odmoru.

Problem. Rezultati testiranj Slo fit iz leta 2010 so kazale negativne spremembe telesnih značilnosti in gibalnih sposobnosti učencev. Danes imajo otroci vse višji indeks telesne mase in vse višjo vrednost podkožnega maščevja. Hkrati med mladimi naraščajo različne kronične nenalezljive bolezni, tj. debelost, diabetes, srčno-žilna obolenja. Podobno stanje smo opazili tudi na naši šoli. Poleg tega smo učitelji ugotavljali, da se mlajši učenci vse težje umirijo, starejši učenci pa pogosto prihajajo v šolo utrujeni in zaspani. Skratka, življenjski slog današnjega povprečnega otroka, mladostnika, kliče po ukrepanju odgovornih s tega področja.

Metode. Na šoli smo iskali načine, kako bi ta negativni trend zaustavili in ga obrnili v pozitivno smer. Želeli smo gibanje vpeljati v učenčev vsakdan. Zato smo se v šolskem letu 2011/12 odločili vpeljati projekt Zdrav življenjski slog. Poleg tega smo iskali ukrepe, kako bi učencem še dodatno ponudili gibalno dejavnost kot protiutež sedenju v šolskih klopeh.

Usmerili smo se na dejavnost, ki bo zajela vse učence od 1. do 9. razreda. Sprva smo razmišljali o klasičnem aktivnem odmoru. Zaradi organizacijskih težav in časovne omejenosti znotraj urnika, smo se v strokovnem aktivu odločili, da se bo gibalni odmor izvajal v razredu, vsak dan po prvi šolski uri ob odprtih oknih, po principu minute za zdravje. Odmor smo poimenovali Bodi

fit odmor. Vsebine 5-minutnega gibalnega odmora so krepilne in raztezne vaje, kardio vadba ter vadba za možgane – »braingym«.

Ugotovitve. Po prvem letu izvajanja Bodi fit odmora smo z anketnim vprašalnikom vprašali učence in učitelje o sprejetosti in zadovoljstvu izvajanja gibalnega odmora. Analiza vprašalnika je pokazala, da je večina dobro sprejela BFO. Mlajši učenci ga zelo radi izvajajo in so bolj aktivni. Pri starejših učencih morajo učitelji uporabiti več motivacijskih ukrepov, da so aktivni, a so po tem odmoru pri pouku bolj zbrani. Po treh letih je ponovno prišlo do pomanjkanja motivacije izvajanja gibalnega odmora. Zato smo povprašali tako učence kot učitelje o predlogih za spremembo. Večina je želela, da se doda glasbena spremljava. Od takrat izvajamo BFO s projekcijo posnete vadbe na glasbeno spremljavo.

Zaključek. Bodi fit odmor na naši šoli predstavlja enega od ukrepov preprečevanja negativnih posledic sodobnega načina življenja učencev in dolgotrajnega sedenja v šolskih klopeh. Hkrati jih z izvajanjem še drugih projektov (Zdrav življenjski slog, Shema šolskega sadja, idr.) navajamo na zdrav način življenja. Poskrbeti pa moramo, da učencem ne zmanjka motivacije za gibanje. S tem nas izzovejo, da iščemo vedno nove vsebine in načine gibanja.

Ključne besede: zdrav način življenja, aktivni odmor, gibanje, učenci

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TEACHING ENGLISH TO YOUNG LEARNERS THROUGH MOVEMENT

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Basis. When children are growing up they need a lot of movement and time to play. All of this has a positive impact and it is encouraging, it is reflected on their physical and cognitive development. Knowledge and skills gained through movement and play are more permanent. Nowadays a teacher can make teaching contents more interesting by including different movement games and by using modern technology – an interactive whiteboard and the Internet. But children still prefer learning through play.

Problem. By teaching English as a foreign language it is very important to bring the language close to children. It's a big challenge for a teacher, how to motivate and which methods use in lessons to teach children.

Methods. If the teacher can make lessons fun where children can be active, without the classical approach of sitting and listening, then he/she is awarded with satisfied students who love coming to school, who cooperate and have fun at the same time. In this way all the goals that are set by the English teacher can be accomplished. The basis of everything is a student who likes learning, who is active and is having fun.

The results of the research. The knowledge of a foreign language gained in this way is more permanent, especially with young learners. This approach demands a lot of teacher's knowledge, a lot of skills and sometimes improvisation during a teaching process. We cannot expect children to communicate actively, to speak fluently by the end of the school year. We have to be aware of the differences in prior knowledge of a foreign language among the children and therefore we have to adjust our teaching. Some of the children react non-verbally, some of them know and use a few words and phrases, and there are also children that have a flair for languages and are able to communicate by using basic phrases and sentences.

Conclusion. By teaching in this way children get more motivated, creative, they become more open and self-confident.

Key words: movement, learning, play, English.

POUČEVANJE ANGLEŠČINE MLAJŠIH OTROK PREKO GIBALNIH AKTIVNOSTI

Izhodišča. Otroci pri svojem odraščanju potrebujejo veliko gibanja in igre. Vse to nanje deluje zelo pozitivno in vzpodbudno, kar se odraža v njihovem telesnem in kognitivnem razvoju. Preko gibanja in igre je pridobljeno znanje trajnejše, ravno tako tudi veščine. Danes lahko učitelj posredovane učne vsebine popestri z različnimi gibalnimi igrami, z uporabo moderne tehnologije – interaktivne table in interneta. Še vedno pa je otrokom najbolj zabavno učenje preko igre.

Problem. Pri poučevanju angleščine kot tujega jezika je pomembno, da se otrokom nekaj, kar je za njih novo, priljubi. Za učitelja je izziv, kako motivirati in na kak način pristopiti k poučevanju otrok.

Metode dela. Učitelj z uporabo metode demonstracije, metode pogovora in razlage uči učence različne gibalne igre, ustvarjalni gib, ples in petje. Takšen pouk je zabaven, otroci so ves čas aktivni. Učenci radi prihajajo k pouku, sodelujejo in se obenem še zabavajo.

Ugotovitve. Tako pridobljeno celostno znanje tujega jezika pri mlajših otrocih je trajnejše. Tak pristop od učitelja zahteva veliko znanja, veščin, včasih tudi improvizacije med poučevanjem. Seveda ne moremo pričakovati, da se bodo učenci ob koncu šolskega leta aktivno sporazumevali in tekoče govorili. Zavedati se je potrebno, da so razlike med učenci zelo velike in zato je potrebno poučevanje prilagajati vsakemu učencu posebej. Nekateri se le neverbalno odzivajo, drugi spet poznajo in uporabljajo nekaj besed in fraz, nekateri, ki so nadarjeni za jezik, pa se tudi že sporazumevajo z osnovnimi frazami in povedmi.

Zaključek. Otroci so ob uporabi integrativnih metod poučevanja bolj motivirani, ustvarjalni, postanejo bolj odprti, krepi se njihova samozavest.

Ključne besede: gibanje, učenje, igra, angleščina.

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LITERACY IN 1ST CLASS WITH THE EMPHASIS ON CREATIVE MOVEMENT

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Children should be given opportunities for a lot of movement but at the same time we shouldn't work instead of them because we are in a hurry or let them waste their time in front of TVs and computers for hours and hours. We have to be careful to notice the child's signals, like restlessness, turning around, standing up during the lessons, sudden need to go to the toilet and taking off slippers - all this warns us that he/she needs more movement. If we don't do that this may lead to unproprie behaviour or to extreme reactions to different stimulus, which may be or too mild or too strong. The more the body, muscular, motion and tactile memory is developed, the better is the basis for future building and saving more abstract cognitive information. In such a way the self-confidence is built and the motivation is sustained so that the child does not give up at the smallest obstacle. From the alphabet of movement comes the concept of movement literacy, which is an obligatory part of learning contents at sports lessons in primary school. Children don't have enough active free time to spend it without the teacher's, parents' or coach's control. With the support of movement the child gets to know and researches the environment where he/she lives, is able to play and socialise in the company of peers.

At the start of the school we want to give all children equal opportunities so that they all make progress according to their previous knowledge and develop their potentials as much as possible. The development of first graders is on quite different levels so we have to make our best to consider the deviations from average in our every day work. Some students are anxious, some do not want to be exposed in the group, others again are not used to group work. There are a lot of students who are less efficient in movement and cannot orientate in the room, on the paper and with the body. To such

children the creative movement enables to feel non competitive , creative experiences leading to success.

The work in the group can be slowly adapted to such children so that they don't feel exposed in front of the others. They can find friends which help them to make the first steps to work and learning. All this work goes on through play , in an easy and spontaneous way of expression, which is more appropriate and friendly for children.

Creative movement is a very useful method for relaxation and calming the class. The most restless students fulfill their need for movement in this way while the calm ones wake up and fill themselves with energy. This method is good also to reach better learning results and memorisation through movement during the work.

Also authours of many professional books and articles underline the significant importance of dancing and movement expression for child's physical, intelectual , emotional and social development. That is why teachers use the creative movement on all levels and subjects in order to improve the quality of learning.

Children are more motivated , creative and calm , less agresive , more open and patient with each other and at the same time more satisfied with themselves.

Key words: movement, creativity, different educational approach

OPISMENJEVANJE OTROK V 1. RAZREDU S POUČENJEM NA USTVARJALNEM GIBU

Otrokom je treba omogočiti veliko gibanja in jih ne ovirati ali delati namesto njih, ker se nam mudi, ali pa jih pustiti pred ekrani in računalniki ure in ure. Pozorni moramo biti na signale otroka, kot so nemirnost, obračanje okrog, vstajanje med poukom, nenadna potreba po stranišču, sezuvanje copatov, ki nas opozarjajo, da mu primanjkuje gibanja. Če tega ne storimo, lahko pride do neprimerne vedenja, ali pa do pretirane ali premile reakcije na določene dražljaje. Bolj kot je razvit telesni, mišični, gibalni in taktilni

spomin, boljša podlaga se ustvarja za kasnejše nadgrajevanje in shranjevanje vse bolj abstraktnih kognitivnih informacij. Tako se gradi samozavest in ohranja motivacija ter vztrajnost, da otrok ne obupa že pri najmanjši oviri. Iz gibalne abecede izhaja koncept gibalnega opismenjevanja, ki je obvezen del učnih vsebin pri pouku športa v osnovni šoli. Otroci nimajo dovolj aktivnega prostega časa, da bi ga preživeli brez nadzora učitelja, starša ali trenerja. S pomočjo gibanja otrok spozna in raziskuje okolico, v kateri živi, se zna igrati in družiti z vrstniki.

Ob vstopu v šolo želimo dati vsem otrokom enake možnosti, da napredujejo v skladu s svojim predznanjem in maksimalno razvijejo svoje potenciale. Razvoj prvošolčkov je na različnih stopnjah, zato pri pouku opazimo velika odstopanja od povprečja in potruditi se moramo, da jih upoštevamo pri vsakdanjem delu. Nekateri učenci se bojijo, drugi se nočejo izpostaviti pred skupino, spet tretji niso vajeni delati v skupini in upoštevati želje drugih, veliko pa je takih, ki so gibalno manj učinkoviti, neokretni in se ne znajo orientirati ne v prostoru, ne na listu in tudi ne s telesom. Takim otrokom ustvarjalni gib omogoča doživljati netekmovalne, ustvarjalne izkušnje, ki so naravnane na uspeh. V skupini se lahko počasi prilagodi delu in ni izpostavljen pred drugimi. Lahko si poišče prijatelje, ki mu pomagajo, da prebrodi prve korake do dela in učenja. Vse to delo poteka preko igre, na nek lahek in neprisiljen način izražanja, ki ga otroci zlahka usvojijo in je njim veliko bližji.

Ustvarjalni gib je zelo uporabna metoda tudi pri sproščanju in umirjanju razreda. Preveč nemirni si s takim načinom dela potešijo potrebo po gibanju, na drugi strani pa se tisti, ki so preveč mirni, zbudijo in napolnijo z energijo. / (nov odstavek)

S to metodo dosegamo boljše učne rezultate, saj si nekateri določene stvari veliko bolj zapomnijo, če se ob delu še gibljejo. Tudi drugi avtorji različnih del in člankov poudarjajo, da ima plesno – gibalno izražanje pri otroku izreden pomen za njegov telesni, intelektualni, čustveni in socialni razvoj. Zato se pri svojem delu učitelji poslužujemo ustvarjalnega giba na vseh ravneh in pri vseh predmetih, da izboljšamo kvaliteto učenja.

Otroci so pri takem načinu dela bolj motivirani, ustvarjalni, umirjeni, manj agresivni, postanejo bolj odprti, potrpežljivi drug do drugega in nenazadnje bolj zadovoljni sami s seboj.

Ključne besede: gibanje, ustvarjalnost, drugačen pedagoški pristop.

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INTEGRATED PHYSICAL ACTIVITY LESSONS AS A METHOD OF PERMANENT COOPERATION BETWEEN A PUBLIC INSTITUTION AND ASSOCIATION

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Baseline. We started developing the Program of Integrated Physical Activity lessons (IGU) in cooperation with the Ski Club (SD) Novinar eight years ago and we first implemented it into the regular Curriculum in the 2010-2011 school year. The basic starting point was the awareness that physical activity is the child's first means of communication with the world and at the same time the foundation for his integrated development. We have studied the importance and role of a narrower and broader context of families with the emphasis on the role of a public institution. Goals of program IGU are next:

1. We will be implementing Integrated Physical Activity lessons (IGU) once per week within groups of children aged 3 to 6.
2. The program will enable all children the possibility of a systematic motor development.
3. Integrated Physical Activity lessons (IGU) will be implemented as part of the Implementation Curriculum and will be free of charge for the parents.
4. The program will be implemented by professional kindergarten workers and sports teachers who will enable continuous quality learning and further development of skills.
5. The management workers of both institutions will ensure continuous monitoring and evaluating of the program.

Problem. Despite the increase of participation of adults in sports activities and higher engagement of children in different organised forms of ex-

cercises, we have observed a significant decrease of motor ability and skills as well as premature involvement in specialised sports with children.

Method. At monitoring and assesment of quality of program we use a method of observation of children, direct monitoring of guidance of adults, evaluation with reflection and education.

Findings. There are 360 children participating in the program on a weekly basis. All children are involved into the program, regardless of their general developmental and physical predispositions as well as their acquired skills and the social environment. The results can be observed through their willingness to cooperate in the physical activities, in acquiring and improving the motor skills, in learning about the importance of physical activity for a healthy lifestyle, and in understanding the significance of cooperation and belonging to a group. The results are also recognised in greater persistence and tolerance with overcoming the physical obstacles and in the children's excitement when they are able to overcome them.

By implementing the program we are ensuring equal conditions for all children. This has proved to be particularly significant for the families which are otherwise unable to afford such forms of physical training. The exchange of knowledge and experience takes place within the common learning environment. Sports teachers participate in the program with their knowledge about the motor development and the abilities of pre-school children, as well as their experience regarding the organisation of physical activities and their ideas as to how make best use of the frequently limited spatial possibilities with the usage of various sports props and other equipment. The professional workers participate in the process with their broad knowledge of developmental characteristics of children, ways of learning and acquiring skills, as well as with the specific knowledge about every individual and a group dynamics. We have introduced the necessary changes into the initial program and have in this way designed the content which helps us to ensure the systematic support to the integrated development of children. By introducing the educational trainings and lesson monitoring we have ensured a high response rate to more demanding situations. In addition, we have also contributed to the professional development of both- sports teachers with teaching smaller groups of pre-school kindergarten children as well as the kindergarten teachers and assistant teachers with the organisation of physical activities.

Conclusion. Considering the developmental and learning characteristics of a pre-school child our criteria of the success of the program is not achieving physical results, but in fact instilling fondness for physical activity by which we are contributing to the physical and psychosocial development of children.

Our finding is that the program has been well implemented into the Curriculum and therefore the fundamental purpose of permanent cooperation has been achieved.

Key words: integrated motor development, pre-school child, permanence

INTEGRACIJSKE GIBALNE URICE KOT NAČIN TRAJNEGA SODELOVANJA MED JAVNIM ZAVODOM IN DRUŠTVOM

Izhodišče. Program Integracijskih gibalnih uric (IGU) smo v sodelovanju s SD Novinar začeli razvijati pred osmimi leti, v redni kurikulum pa smo ga prvič vpeljali v šol. letu 2010/2011. Osnovno izhodišče je bilo zavedanje, da je gibanje prva komunikacija otroka s svetom in osnova za njegov celosten razvoj. Proučili smo pomen in vlogo ožjega in širšega konteksta družin s podarkom na vlogi javnega zavoda. Cilji programa IGU so sledeči::

1. IGU bomo izvajali enkrat tedensko, v skupinah otrok starih od 3. do 6. let.
2. S programom bomo vsem otrokom nudili možnost sistematičnega gibalnega razvoja.
3. IGU bomo izvajali kot del izvedbenega kurikula in bo za starše brezplačen.
4. Izvajalci bodo strokovni delavci vrtca in športni pedagogi, kar bo omogočalo kontinuirano in kakovostno učenje ter spopolnjevanje.
5. Vodstveni delavci obeh institucij bomo zagotovili stalno spremljanje in evalviranje programa.

Problem. Kljub porastu ukvarjanja s športnimi aktivnostmi odraslih in višji vključenosti otrok v različne organizirane oblike gibanja, pri slednjih opazamo znaten upad gibalnih zmožnosti in spretnosti ter prezagodnje vključevanje v specializirane športe.

Metode. Pri spremljanju in ocenjevanju kakovosti programa uporabljamo metodo opazovanja otrok, neposredno spremljanje dela odraslih, evalvacija z refleksijo in izobraževanje.

Ugotovitve. Tedensko je v program vključenih 360 otrok. Vključeni so vsi otroci, ne glede na splošne razvojne in gibalne predispozicije, usvojene spretnosti in socialno okolje. Rezultati se izkazujejo v njihovi pripravljenosti za sodelovanje v gibalnih aktivnostih, usvajanju in krepitevi gibalnih veščin, spoznavanju pomena gibanja za zdrav življenjski slog in v razumevanju pomembnosti sodelovanja ter pripadnosti skupini. Kažejo se tudi v večji vztrajnosti in potrpežljivosti pri premagovanju gibalnih ovir in v navdušenju, ko jih uspejo preseči. Z izvajanjem programa zagotavljamo enake pogoje za vse otroke, kar se je izkazalo za posebej pomembno v družinah, ki jim taka oblika vadbe sicer ni dostopna. Izmenjava znanj in izkušenj poteka v okviru skupnega učnega okolja. Športni pedagogi vstopajo z vedenjem o gibalnem razvoju in zmožnostih predšolskih otrok, o pripravi gibalnih dejavnosti ter z idejami, kako izkoristiti večkrat omejene prostorske možnosti ob uporabi raznolikih športnih in drugih rekvizitov. Strokovni delavci v proces vstopajo s širokim znanjem o razvojnih značilnostih otrok, načinov učenja in usvajanja veščin, kakor tudi s poglobljenim poznavanjem vsakega posameznika in dinamike skupine. V začetni program smo vnesli potrebne spremembe in oblikovali vsebino, s katero zagotavljamo sistematično podporo celostnemu gibalnemu razvoju otrok. Z vpeljavo izobraževanj in hospitacijami neposrednega dela smo zagotovili visoko stopnjo odzivnosti na zahtevnejše situacije, prispevali k strokovnemu razvoju športnih pedagogov pri vodenju malih skupin predšolskih otrok v vrtcu in strokovnemu razvoju vzgojiteljev in pomočnikov vzgojiteljev pri pripravi gibalnih dejavnosti.

Zaključek. Upoštevajoč značilnosti razvoja in učenja predšolskega otroka naše merilo uspešnosti programa ni doseganje gibalnih rezultatov, temveč razvijanje ljubezni do gibanja, s čimer prispevamo k fizičnemu in psihosocialnemu razvoju otrok.

Ugotavljamo, da je program implementiran v kurikulum in s tem temeljni namen trajnega sodelovanja dosežen.

Ključne besede: celostni gibalni razvoj, predšolski otrok, trajnost

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PHYSICAL EXERCISE AND ITS EFFECT ON THE DEVELOPMENT OF CHILD'S ABILITY

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The following article focuses on the definition of regular exercise, its importance and influence on the development of the child's motor abilities. It brightens its role in the field of movement (in kindergarten), defines its importance (regular and systematic implementation), and presents a longitudinal study, where we study the influence of experimental stimulus, which is represented by a set of professional and systematically planned exercise classes as a form of psychomotor learning of children.

At the curriculum level, kindergarten teachers are aware of the importance of exercises to the development of children's physical abilities; however they do not implement it enough in their physical education.

The aim of the study was: to determine the influence of systematic and directed programme of exercise on the development of child's abilities and how it can contribute to a more successful development of child's abilities in a longer period of time. The findings show that the exercise programme produced significant improvements of motor skills of both groups (which is not seen in the result section); however the experimental group (new planned exercise programme), in larger degree, improved its physical abilities in comparison to the controlled group (regular planned exercise programme). The results of the study confirm that development of children's physical abilities with appropriate long-term and planned exercise programme (appropriate content composition, quantity and intensity), contributes to a more successful development of physical abilities in comparison to a conventional manner of regular physical activities in kindergarten.

Total of 28 children (four to six years of age) recruited from kindergarten, were equally divided into control (CON, N = 14) and experimental (EXP, N = 14) groups, respectively. Thus, participants in CON group exercised by

curriculum education programme (e.g. had regular movement activities only), while participants in EXP group exercised by systematic and guided programme with the emphasis on the development of motor abilities within the framework of motive contents. We have tested both experimental and controlled group in twelve motor tests: jumping with both legs simultaneously (SOP), rolling the ball around feet (KZO), running zig-zag (TCC), walking backwards through hoops (HSO), running 20meters (T20), Romberg's test (RTL and RTD), the throw of the ball in a target (MZC), running 10 x 5 meters (T50), long jump from a spot (SDM), throw of the ball (MZO), jumping with one leg (EPL in EPD) and Cooper's test (COT). With tests, we were determining the development of aptitude of balance, coordination, strength, explosive strength, speed, accuracy and endurance. Exercise programme contained exercise units that represented essential part of experimental programme. It consisted of different contents that were emphasising development of chosen physical abilities (balance, coordination, strength, explosive strength, speed, accuracy and endurance). Before and following five months programme, both morphological and motor status of children was assessed.

The results of present study showed that the participants of EXP group significantly improved their motor abilities pre to post, compared to CON group.

With the obtained results, we have proved that regular and systematic exercise of children with a correct, professional approach has much more impact as we/they have presumed in the field on development of children's motor abilities. This confirms our assumption that professionally guided (systematic and directed) exercise significantly affects the improvement of children's motor abilities.

Key words: motive activity, comparison, pedagogical experiment, motor development, pre-school period

GIBALNA VADBA IN NJEN UČINEK NA RAZVOJ GIBALNIH SPOSOBNOSTI OTROK

Članek se osredotoča na opredelitev redne vadbe, njen pomen in vpliv na razvoj otrokovih motoričnih sposobnosti. Osvetljuje njeno vlogo na področju gibanja (v vrtcu), opredeljuje njen pomen (redno in sistematično izvajanje) in predstavlja dolgoročno študijo, kjer preučujemo vpliv eksperimentalnega stimulansa, ki ga predstavlja niz profesionalnih in sistematično načrtovanih vadbenih ur kot obliko psihomotoričnega učenja otrok.

Na ravni Kurikuluma se vzgojitelji v vrtcih zavedajo pomena vadbe za razvoj otrokovih fizičnih sposobnosti; vendar jih v gibalnem izobraževanju ne izvajajo dovolj.

Namen študije je bil: ugotoviti vpliv sistematičnega in vodenega programa gibanja na razvoj otrokovih motoričnih sposobnosti in, kako lahko v daljšem časovnem obdobju, v primerjavi z uveljavljenim načinom dela v vrtcu prispeva k uspešnejšemu razvoju motoričnih sposobnosti otrok. Na osnovi rezultatov ugotavljamo da je program vadbe povzročil znatne izboljšave motoričnih veščin obeh skupin (kar ni mogoče videti v razdelku o rezultatih); vendar pa je eksperimentalna skupina (nov načrtovani vadbeni program) v večji meri izboljšala svoje gibalne sposobnosti v primerjavi s kontrolno skupino (redni program vadbe). Rezultati študije potrjujejo, da razvoj gibalnih sposobnosti otrok z ustreznim dolgoročnim in načrtnim programom vadbe (ustrezna vsebinska sestava ter količina in intenzivnost), prispeva k uspešnejšemu razvoju gibalnih sposobnosti otrok v primerjavi z uveljavljenim načinom rednih dejavnosti gibanja v vrtcu.

Izbranih je bilo 28 otrok (štiri do šest let), iz vrtca, ki so bili enako razdeljeni na kontrolno skupino (CON, N = 14) in eksperimentalno skupino (EXP, N = 14). Sodelujoči v skupini CON so izvajali izobraževalni program Kurikuluma (npr. imeli so le redne dejavnosti gibanja), medtem ko so udeleženci v skupini EXP izvajali sistematičen in voden program s poudarkom na razvoju motoričnih sposobnosti v okviru vadbenih vsebin. Tako eksperimentalno kot kontrolno skupino smo testirali v dvanajstih motoričnih testih: sonožni poskoki (SOP), kotaljenje žoge okrog stopal (KZO), tek cik-cak (TCC), hoja skozi obroče nazaj (HSO), tek 20 metrov (T20), Rombergov test (RTL in RTD), met žoge v cilj (MZC), tek 10 x 5 metrov (T50), skok v daljino z mesta (SDM),

met žogice (MZO), enonožni poskoki (EPL in EPD) in Cooperjev test (COT). S testi smo ugotavljali razvitost sposobnosti ravnotežja, koordinacije, moči, eksplozivne moči, hitrosti, preciznosti, in vzdržljivosti. Vadbeni program je bil sestavljen iz vadbenih enot, katerih glavni del je predstavljal bistveni del eksperimentalnega programa. Zajemal je različne vsebine, ki so poudarjale razvoj izbranih motoričnih sposobnosti (ravnotežja, koordinacije, moči, eksplozivne moči, hitrosti, preciznosti, in vzdržljivosti). Pred in po devetnajst mesečnem programu smo ocenili morfološki in motorični status otrok. Rezultati študije so pokazali, da so udeleženci skupine EXP bistveno izboljšali svoje motorične sposobnosti pred objavo v primerjavi s skupino CON.

Z dobljenimi rezultati smo dokazali, da ima redno in sistematično vadenje otrok s pravilnim, profesionalnim pristopom veliko večji vpliv, kot smo mislili, na področju razvoja motoričnih sposobnosti otrok. To potrjuje našo domnevo, da strokovno usmerjena vadba (sistematična in vodena) bistveno vpliva na izboljšanje motoričnih sposobnosti otrok.

Ključne besede: gibalna dejavnost, primerjava, pedagoški eksperiment, motorični razvoj, predšolsko obdobje.

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OUTDOOR PHYSICAL ACTIVITIES: LET'S GET THE CHILDREN PLAY OUTDOORS

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Starting points. Children are not encouraged enough to do sports activities and don't have many opportunities for movement in nature. We wanted to encourage children and parents to do more physical and sporting activities in nature, because they have a great influence on the children's health and they build up their immune system. In addition, they have a positive impact on children's psychosocial development, cognitive abilities and the physical and motor development.

When implementing the project, we were aware of the important role of the parents in motivating their children for sports activities, and therefore we invited them to actively participate in the organization of sports activities in the kindergarten.

Problem statement. In the kindergarten, we don't stimulate the children enough to be physically active. This is often hampered by the lack of adequate space and sports equipment. The aim of the research was to determine the influence of physical activities in nature on the motivation of children for movement as well as the children's health compared to the previous year or lessons during this year when the movement activities were carried out indoors. The second goal was to determine to what extent parents encourage the children to do sports activities outdoors.

Methods. A sample of the study included 40 children aged between three and six years of age with different physical abilities. The children were divided into two groups of 20 children, each group had two nurses. We carried out activities with various sports requisites. The data have been obtained by observing once a week for one hour the motivation and perseverance of children during outdoor and indoor sports activities. Through the questionnaires distributed to parents, we obtained information on what types of sports

activities their children practiced, how often they played with their children, and whether they were more physically active as a result of the incentives in the kindergarten compared to the previous school year. We compared the number of children absent due to illness during this school year and the previous school year.

Findings. The comparison of performing physical activity indoors and outdoors has shown that most children did the outdoor activities with greater joy and greater persistence.

However, when the children are not in the kindergarten, parents play an important role in stimulating them. We also compared data of the number of absence of children due to upper respiratory tract infections and found out that in the last school year almost half of the children were absent more than three times for a week. This year only one third of the children were absent only one week.

Conclusion. The survey confirmed the fact that children like to participate in sports activities if they are motivated by their educators or parent and that, consequently, their health improves.

Key words: health, motivation, positive example, sports activities, children

GIBALNE AKTIVNOSTI V NARAVI: PRIBLIŽAJMO NARAVO OTROKOM

Izhodišča. Otroci dobivajo premalo spodbud za športne aktivnosti in možnosti za gibanje v naravi. Otroke in starše smo želeli spodbuditi za več gibalnih in tudi športnih aktivnosti v naravi, saj imajo le-te med drugim tudi velik vpliv na zdravje in krepitev imunskega sistema. Poleg tega pa pozitivno vplivajo na psihosocialni razvoj, na kognitivne sposobnosti ter na telesni in gibalni razvoj otrok.

Pri izvedbi projekta smo se zavedali pomembne vloge staršev pri motivaciji otrok za športne aktivnosti, zato smo jih povabili k aktivnem sodelovanju pri organizaciji športnih dejavnosti v vrtcu.

Problem. V vrtcu dajemo, premalo spodbujanju gibalnih aktivnosti otrok. Pri tem nas pogosto ovira pomanjkanje ustreznih prostorov ter športnih rekvizitov. Cilj raziskave je bil ugotoviti, kakšen vpliv imajo gibalne dejavnosti v naravi na motivacijo otrok za gibanje in tudi na zdravje otrok v primerjavi s preteklim letom ali z urami v tem letu, ko so se gibalne aktivnosti izvajale v notranjih prostorih. Drugi cilj je bil ugotoviti v kakšni meri starši spodbujajo športne aktivnosti otrok v naravi.

Metode. Vzorec raziskave je obsegal 40 otrok starih med tremi in šestimi leti starosti, različnih gibalnih sposobnosti. Otroci so bili razdeljeni v dve skupini po približno 20 otrok, vsaka skupina z dvema vzgojiteljicama. Aktivnosti smo izvajali z različnimi športnimi rekviziti. Podatke smo pridobivali tako, da smo enkrat tedensko po eno uro opazovali motivacijo in vztrajnost otrok pri športnih dejavnostih na prostem in v notranjih prostorih. Preko vprašalnikov, ki smo jih razdelili staršem pa smo pridobili podatke o tem, kakšne oblike športnih aktivnosti vključujejo svoje otroke, kako pogosto le-te izvajajo skupaj z otroci in ali so zaradi spodbud v vrtcu bolj ali manj športno aktivni kot v preteklem šolskem letu. Primerjali smo število odsotnosti otrok zaradi bolezni v tem šolskem letu in preteklem šolskem letu.

Ugotovitve. Primerjava izvajanja gibalnih aktivnosti v notranjih prostorih in na prostem je pokazala, da je večina otrok pristopala z večjim veseljem in večjo vztrajnostjo k gibalnim aktivnostim v naravi. Pri izven vrtčevskih dejavnostih pa so pomembne spodbude, ki jih otrok dobi od staršev.

Primerjali smo tudi podatke o številu odsotnosti otrok zaradi infekcij zgornjih dihal in ugotovili, da je v lanskem šolskem letu skoraj polovica otrok izostala več kot trikrat letno po en teden v letošnjem letu pa le tretjina enkrat po en teden.

Zaključek. Raziskava je potrdila dejstvo, da se otroci, motivirani s strani vzgojiteljev ter staršev raje udeležujejo športnih aktivnosti in posledično to pozitivno vpliva na njihovo zdravje.

Ključne besede: zdravje, motivacija, pozitiven vzgled, športne aktivnosti, otroci

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PHYSICALLY ACTIVE EACH DAY

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Introduction. The daily physical activity of children (regular and intensive enough) is an important factor of development, since it helps to maintain a suitable level of motion capabilities and skills, strengthens and protects health, encourages the cognitive development, contributes to the formation of habits and those behavioural patterns, which can influence the physical activity in all periods of life.

The backgrounds and issue. We are noticing that children are nowadays exposed to a sedentary way of life with a lack of physical activities. The consequences are adverse effects on their health and development.

In the field of physical activities, we have set the following goals:

- to ensure adequate amount of physical activities and their intensity;
- to put the child into the role of a co-creator of the educational process;
- to ensure relaxed and spontaneous physical activities in different environments in every weather and season of the year.

Work methods and forms:

- Parents are aware of the significance of physical activities as a useful way of spending the spare time. The parent-teacher meeting in the form of workshops has encouraged the majority of parents to co-create the child's spending of the spare time.
- Several times a year we carry out physical/sports classes in such a way that we include children in the planning of activities. Children choose the game in the warm-up phase, the accessory in gymnastic exercises, they choose the accessories and build up the stations in the main part and choose the game in the final part. In this activity, we take over the role of the consultant and organizer.

- During physical activities, it is very important that the child is properly dressed and wears proper shoes. We started to measure the time of undressing prior to the physical/sports class and after it. We drew a graph and recorded the time for a longer period.
- Children could choose physical games according to their own desire. When they have mastered the rules of the games, we could leave them with their own ingenuity and creativity.
- Near the kindergarten there is a large fenced playground, where several times a year during all seasons children drove bicycles, played football, basketball, rolled down the hill, walked over high grass, hung out with parents etc.
- Children visited the motion corner, when they wanted to and according to a predetermined order. The activities were sometimes planned and guided in the presence of the kindergarten teacher or individually according to the selection of children.
- We considered the suggestion of parents and carried out a joint physical active meeting. The physical activities for children together with their parents have to satisfy the child's need for motion, playing and relaxation. The child feels safe along parents, is happy to participate and performs different tasks. The activities were planned and carried out together with children.

Findings and discussion. We have the greatest impact on the child's everyday life, when we directly include them together with their parents into work as co-creators of the educational process. Precisely the participation of children proves in practice to be the most effective form of work. The key to successful work in the group is particularly the participation of all involved in the educational process (the child, educational staff, parents).

Conclusion. The key to an active childhood as a lever for a successful life is to enable the child to grow up into a contextually rich, encouraging and diverse environment with lots of physical and motoric activities with possibilities for learning and gaining experiences. The consequence of these should be the child's own activity.

Key words: pre-school child, co-creation, personal activity, physical activity, planning

GIBALNO AKTIVNI VSAK DAN

Uvod. Vsakodnevna gibalna dejavnost otrok (redna in dovolj intenzivna) je pomemben dejavnik razvoja, saj ohranja primerno raven gibalnih sposobnosti in spretnosti, krepi in varuje zdravje, spodbuja kognitivni razvoj, prispeva k oblikovanju navad in tistih vedenjskih vzorcev, ki lahko vplivajo na gibalno aktivnost v vseh življenjskih obdobjih.

Izhodišča in problem. Opažamo, da so otroci v današnjem času izpostavljeni sedentarnemu načinu življenja in pomanjkanju gibanja. Posledica so škodljivi vplivi na njihovo zdravje in razvoj.

Na področju gibanja smo si zastavili cilje:

- zagotoviti zadostno količino gibalnih aktivnosti in njihovo intenzivnost;
- postaviti otroka v vlogo soustvarjalca vzgojnega procesa;
- omogočati sproščeno in spontano gibanje v različnih okoljih v vsakem vremenu in letnem času.

Metode in oblike dela:

- Starši se zavedajo pomena gibanja kot koristnega preživljanja prostega časa. Roditeljski sestanek v obliki delavnic je večino staršev spodbudil k soustvarjanju otrokovega preživljanja časa.
- Nekajkrat letno izpeljemo uro gibalne/športne vzgoje tako, da v načrtovanje dejavnosti vključimo otroke. Otroci izberejo igro v ogrevalnem delu ure, pripomoček pri gimnastičnih vajah, izberejo pripomočke in sestavijo postaje v glavnem delu ure ter izberejo igro v zaključnem delu. Pri tej dejavnosti se postavimo v vlogi svetovalca in organizatorja.
- Med gibalnimi aktivnostmi je zelo pomembno, da je otrok primerno obut in oblečen. Pričeli smo meriti čas preoblačenja pred uro gibalne/športne vzgoje in po njej. Narisali smo graf in beležili čas v daljšem časovnem obdobju.
- Otroci so lahko izbirali gibalne igre po svoji želji. Ko so usvojili pravila iger, smo jih lahko prepustili lastni iznajdljivosti, ustvarjalnosti in kreativnosti.

- V bližini vrtca se nahaja veliko ograjeno igrišče. Večkrat letno v vseh letnih časih so otroci na njem kolesarili, igrali nogomet, košarko, se kotalili po hribčku navzdol, hodili po visoki travi, družili s starši idr.
- Gibalni kotiček so otroci obiskovali, ko so želeli, in po vnaprej določenem vrstnem redu. Aktivnosti so bile včasih načrtovane in vodene ob prisotnosti vzgojitelja ali samostojne po izbiri otrok.
- Upoštevali smo predlog staršev in izpeljali skupno gibalno srečanje. Gibalne aktivnosti za otroke skupaj s starši morajo zadovoljevati otrokovo potrebo po gibanju, igri in sprostitvi. Otrok se ob starših počuti varnega, z veseljem sodeluje in izvaja različne naloge. Dejavnosti smo načrtovali in izpeljali skupaj z otroki.

Ugotovitve, razprava. največji vpliv na otrokov vsakdan imamo takrat, ko v delo neposredno vključimo otroke in starše kot soustvarjalce vzgojno izobraževalnega procesa. Ravno participacija otrok se v praksi kaže kot najučinkovitejša oblika dela. Ključ do uspešnega dela v skupini vidimo ravno v participaciji vseh udeležencev v procesu vzgoje in izobraževanja (otrok, vzgojno osebje, starši).

Zaključek. Ključ do aktivnega otroštva kot vzvoda za uspešno življenje je omogočati otroku odraščanje v vsebinsko bogatem, spodbudnem in raznolikem okolju, ki zajema veliko gibalnih in motoričnih aktivnosti ter ponuja možnosti za učenje in pridobivanje izkušenj. Posledica teh naj bo otrokova lastna aktivnost.

Ključne besede: predšolski otrok, soustvarjanje, lastna aktivnost, gibanje, načrtovanje

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ADAPTED METHODS AND FORMS OF WORK REGARDING PHYSICAL ACTIVITY OF CHILDREN WITH SPECIAL NEEDS IN REGULAR AND DEVELOPMENT CLASSES OF NAJDIHOJCA NURSERY SCHOOL

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Starting points. Early childhood is undoubtedly the most important period for development of an individual. Since most children, whether requiring special care or not, are included in educational institutions in the early childhood, there should be no doubt about the extreme importance of the nursery school in the child's development.

In this paper special attention is given to one of the key factors of development: exercise. Exercise is also very important when working with children with special needs.

Problem. Najdihojca nursery school favours the limited population of children. In addition to 16 children (defined as children with special needs by the Placement of Children with Special Needs Act) in regular classes there are another 10 children on observation. Two classes out of 49 are development classes including 12 children with various diagnoses.

In every single class the professional staff are endeavouring to enable the children to develop their movement abilities and skills as much as possible, since exercise correlates with all other areas of children's life and development.

Some of this paper methods and forms of adapted physical activity used in the Najdihojca nursery school for children with special needs from regular as well as development classes.

Methods. Beside offering additional professional help the educational staff must also use adapted programme for children with special needs in regular classes. This means that for each child an appropriate environment

and mobility aids must be prepared. Several examples of good practice are introduced that are carried out in Najdihojca's regular classes.

Additionally, work with children in development classes is introduced. In those classes children in addition to adapted movement activity also attend horse riding and swimming therapies each month, financed by the nursery school.

Findings. Through practice we found that it's important for children with special needs to start with physical activities as early as possible as it effects different areas of child's development.

Beside movement skills, cognitive, socially emotional abilities it also affects personality development. It improves mental health, cognitive mind productivity and helps to relax physical and mental tension on a constructive way through physical activities.

Horse riding and swimming therapies proved to be very effective as they offer the child comfort and moving development as well as independence and possibilities to learn and develop speaking language and social skills.

Conclusion. Employees of the Najdihojca nursery school are aware that one of the basic child's needs is the need for movement activity and that working with children with special needs require individual approach and adaptation in order to achieve the optimal development. Thus for each child they prepare individual program and motivational environment, create various situations and offer appropriate movement activities that are crucial for further development of other skills. They strive to contribute their share and give all their time and effort to establish a good basis for the development of children.

Key words: development, children with special needs, physical activity, adaptations

PRILAGOJENE METODE IN OBLIKE DELA NA PODROČJU GIBANJA OTROK S POSEBNIMI POTREBAMI V REDNIH IN RAZVOJNIH ODDELKIH VRTCA NAJDIHOJCA

Izhodišča. Zgodnje otroštvo predstavlja najpomembnejše obdobje za razvoj človeka. Ker je večina otrok, tako polnočutnih kot tudi s posebnimi potrebami, v zgodnjem otroštvu vključena v vzgojno-izobraževalne ustanove, ne smemo spregledati dejstva, da ima vrtec zelo pomembno in poučno vlogo v otrokovem razvoju.

Posebno pozornost smo tokrat namenili enemu izmed ključnih področij razvoja, in sicer gibanju, ki je zelo pomembno področje tudi pri delu z otroki s posebnimi potrebami.

Problem. V vrtcu Najdihojca smo otrokom s posebnimi potrebami zelo naklonjeni, saj imamo v redne oddelke vrtca vključenih 16 otrok, ki so z odločbo o usmerjanju opredeljeni kot otroci s posebnimi potrebami, poleg njih pa imamo še 10 otrok v postopku opazovanja. Med 49 oddelki imamo tudi dva razvojna oddelka, v katera je vključenih 12 otrok z različnimi diagnozami.

Prav v vseh oddelkih, v katere so otroci vključeni, se strokovni delavci trudijo otrokom omogočiti, da čim bolj razvijejo svoje gibalne sposobnosti in spretnosti, saj je gibanje v korelaciji z vsemi drugimi področji otrokovega življenja in razvoja.

V prispevku bomo predstavili nekatere metode in oblike prilagojenega izvajanja gibalne aktivnosti, ki se v vrtcu Najdihojca izvajajo z otroki s posebnimi potrebami, ki so vključeni tako v redne, kot tudi razvojna oddelka vrtca.

Metode. Vključitev otroka s posebnimi potrebami v redne oddelke vzgojno-izobraževalnih ustanov od strokovnih delavcev, poleg nudenja dodatne strokovne pomoči, zahteva tudi prilagojeno izvajanje programa. To pomeni, da se za posameznega otroka pripravi primeren prostor in pripomočke za gibanje ter prilagodi gibalne naloge. V nadaljevanju bomo predstavili nekaj primerov dobre prakse, ki se izvajajo v rednih oddelkih našega vrtca.

Otroci v razvojnih oddelkih pa se poleg prilagojene gibalne aktivnosti v vrtcu, mesečno vključujejo tudi v terapije jahanja in plavanja, ki so financirane s strani vrtca.

Ugotovitve. Skozi prakso smo ugotovili, da je pri otrocih s posebnimi potrebami pomembno, da z gibalnimi dejavnostmi začnemo kar se da zgodaj, saj vplivajo na različna področja razvoja. Poleg razvoja gibalnih, kognitivnih, socialno-čustvenih sposobnosti, vplivajo tudi na oblikovanje osebnosti. Prav tako pripomorejo k boljšemu duševnemu zdravju in umski storilnosti, otrok pa ima skozi gibalne dejavnosti možnost sprostitve psihične in telesne napetosti na konstruktiven način.

Tudi terapije jahanja in plavanja, ki jih izvajamo z otroki s posebnimi potrebami v našem vrtcu, so se skozi prakso izkazale za zelo učinkovite, saj so poleg gibalnega razvoja in ugodja, ki ga terapija prinaša otroku, močno poudarjena tudi področja samostojnosti, govora - jezika in učenje ter razvijanje socialnih veščin.

Zaključek. V našem vrtcu se vsi zaposleni zavedamo, da med temeljne otrokove potrebe sodi potreba po gibalni aktivnosti ter da delo z otroki s posebnimi potrebami zahteva od strokovnih delavcev individualen pristop in prilagajanje okolja za najbolj optimalen razvoj. Trudimo se, da za posameznega otroka pripravimo individualni program in okolje, ki ga motivirata za gibalno aktivnost. Poleg tega ustvarjamo različne situacije in ponujamo primerne gibalne aktivnosti, ki so odločilnega pomena za poznejši razvoj ostalih otrokovih sposobnosti. Stremimo k temu, da za otroka prispevamo svoj delček in ne varčujemo s časom in s trudom za postavitve trdnih temeljev njegovega razvoja.

Ključne besede: razvoj, OPP, inkluzija, gibalna aktivnost, prilagoditve

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THE INFLUENCE OF MOTION ON DEVELOPMENT OF GRAPHOMOTORICS IN PRESCHOOL CHILDREN

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Children who have well-developed gross and fine motor skills are more skilled in everyday life and are more likely to follow literacy, starting with a formal learning of reading and writing. We are interested in the development of graphomotorics in the pre-school age as a driving ability for writing, that is, the creation of letters and other written signs. Graphomotorics is a specific web of abilities that enable the child to detect a graphic record, to imitate it, and orientate on the writing surface. It includes the development of eye – arm coordination, orientation and direction, grip of the pen and body position when sitting at the table.

The purpose of the paper is to determine whether motion graphics exercise influences the development of graphomotorics in the pre-school period and in what way. Exercises cover straight, circular and curved lines that the child experiences with the whole body and with his own experience. The aim is for the child to move his body to the senses of physical movements and to connect them with graphic moves. In the graphomotoric record of these lines, children recognize and name the lines, draw them in the right direction, raise the appropriate posture of the body when drawing at the table, and develop a three-sided grip reception of the pen.

The graphic exercises were planned systematically. We took into account the holistic approach to the child and the gradual progression of exercises. The success of the exercises is expressed in the initial recognition of direction, drawing in a larger unlimited space and more demanding drawing in a smaller confined space. We are noteworthy about the difficulty of exercises, so we began to learn straight lines, followed by circular and curved lines. We performed motion graphic exercises in a group of children aged 5-6, continuously from October to May, once a week. At work we used devices and materials that are familiar to children, diffe-

rent unstructured and didactic material. The method of play, display, observation, guidance and conversation prevailed. Data was obtained on the basis of the observation of exercises and graphomotoric records of straight, circular and curvilinear lines. We analyzed the performed exercises. We have established that with systematic motion graphics we influence the development of graphomotoric abilities. After the exercises, the children named the lines and draw them in the appropriate direction from top to bottom and from left to right. They were correctly oriented on the writing surface and separated between the top-bottom and left-right. Even in a free drawing, hardened lines were more often drawn. The reception of the grip of the pen in drawing, the pressure on the base and the stance of the body when sitting at the table were more appropriate than at the beginning of the school year.

Graphomotor exercises can be planned through out an individual areas of child development. In this regard, we take into account that the development of the child is carried out according to certain laws and in the foreseeable sequence, so that the child learns with all the senses, with active participation and with the repeat of the activity. We believe that children in whom we have systematically developed graphomotor skills are more successful in literacy at school. We consider that the development of graphomotor as a specific part of general motoring in the pre-school period should be given special attention.

Key words: motion graphic exercises, motion, play, graphomotor record

VPLIV GIBANJA NA RAZVOJ GRAFOMOTORIKE PRI PREDŠOLSKEM OTROKU

Otroci, ki imajo dobro razvito grobo in fino motoriko so spretnejši pri vsakodnevnih veščinah v življenju in lažje sledijo opismenjevanju, ki se začne s formalnim učenjem branja in pisanja. Zanima nas razvoj grafomotorike v predšolskem obdobju kot gibalne sposobnosti za pisanje, torej oblikovanje črk in drugih pisnih znamenj. Grafomotorika je specifičen splet sposobnosti, ki omogočajo, da otrok grafični zapis zazna, ga posname in se orientira na

pisalni površini. Vključuje razvoj koordinacije oko-roka, orientacijo in smer, prijem pisala in položaj telesa pri sedenju za mizo.

Namen prispevka je ugotoviti, ali z gibalno grafičnimi vajami vplivamo na razvoj grafomotorike v predšolskem obdobju in na kakšen način. Vaje zajemajo ravne, krožne in krive črte, ki jih otrok doživi s celim telesom in z lastno izkušnjo. Cilj je, da otrok z gibanjem ozavesti telesne gibe in jih poveže z grafičnimi potezami. Pri grafomotoričnemu zapisu omenjenih črt otrok spozna in poimenuje črte, riše jih v pravilni smeri, ozavesti ustrezno držo telesa pri risanju za mizo in razvije triprstni prijem pisala.

Gibalno grafične vaje smo načrtovali sistematično. Upoštevali smo celosten pristop k otroku in postopnost vaj. Postopnost vaj je izražena v začetnem spoznavanju smeri, risanja v večjem neomejenem prostoru in zahtevnejšemu risanju v manjšem omejenem prostoru. Pozorni smo na težavnost vaj, zato smo začeli z učenjem ravnih črt, sledile so krožne in krive črte. Gibalno grafične vaje smo izvajali v skupini otrok starih 5-6 let, kontinuirano od oktobra do maja, enkrat na teden. Pri delu smo uporabili otrokom znane pripomočke in materiale, različen nestrukturiran in didaktični material. Prevladovala je metoda igre, prikaza, opazovanja, vodenja in pogovora. Podatke smo pridobili na osnovi opazovanja izvajanja vaj in grafomotoričnih zapisov ravnih, krožnih in krivih črt. Analizo izvedenih vaj smo zapisali.

Ugotovili smo, da s sistematičnimi gibalno grafičnimi vajami vplivamo na razvoj grafomotoričnih sposobnosti. Po izvedbi vaj so otroci črte poimenovali in jih risali v ustrezni smeri od zgoraj navzdol in od leve proti desni. Pravilno so se orientirali na pisalni površini in ločili med zgoraj-spodaj ter levo-desno. Tudi v prosti risbi so pogosteje risali utrjene črte. Prijem pisala pri risanju, pritisk na podlago in drža telesa pri sedenju za mizo so bili ustrežnejši kot v začetku šolskega leta.

Grafomotorične vaje lahko načrtujemo skozi posamezna področja otrokovega razvoja. Pri tem upoštevamo, da razvoj otroka poteka po določenih zakonitostih in v predvidljivem zaporedju, da se otrok uči z vsemi čuti, z aktivno udeležbo in s ponavljanjem dejavnosti. Verjamemo, da so otroci, pri katerih smo sistematično razvijali grafomotorične sposobnosti, uspešnejši pri opismenjevanju v šoli. Menimo, da je razvoju grafomotorike kot specifičnemu delu splošne motorike v predšolskem obdobju potrebno nameniti posebno pozornost.

Ključne besede: gibalno grafične vaje, gib, igra, grafomotorični zapis

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IMPROVING SELF-IMAGE THROUGH PHYSICAL ACTIVITY

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Introduction. Positive early experience provides a child a foundation for a lifelong learning. A child gains confidence in his own body and improves his self-image by overcoming physical challenges. A child's development is holistic and takes place on different areas. Therefore child's activity in the first years of life is not only the base for motor development, but also has impacts on physical, cognitive, emotional and social development and builds a positive attitude towards physical activities.

Problem. Physical activities are significantly important for the kid in the early years, as is the role of the preschool teacher in planning them. In preschool age, especially in the first age group (toddlers 1–3 years) we can primarily talk about physical self-conception, which is the base for formation of other components of the self-image. It can be noticed that better physically skilled children are more confident and show greater trust in their own body and abilities, and have furthermore a better self-image, so they are more likely to face physical challenges and also look for their own ways of solving them. On the contrary, less skilled children usually avoid different, in their opinion too difficult to execute, physical challenges due to their lower physical self-conception.

Methods. The role of a preschool teacher is therefore not only to provide stimulating physical environment (e.g. a playground, a gym, a natural environment and a usage of diverse sport equipment), but also support with a positive feedback, which encourages a child to exceed his current physical abilities.

We can talk about the zone of proximal development (ZPD) when a child marginally achieves more with the assistance of an adult/preschool teacher, with guidance and support at the right time and at the right rate. It is therefore a must to observe child problem-solving abilities, monitoring

his responses and recording observations. These are important information for further planning of our pedagogical work. The observation increases our understanding of the child and improves curriculum and exchange of information towards parents.

Discussion. We find the role of a preschool teacher in the process of learning for a child as very important. When monitoring the child's progress in the course of movement activities, we have noticed a child's visible satisfaction (a smile, a relaxed posture, etc.) after a successfully executed physical challenge. Monitoring a child body language offers preschool teacher a lot of information about child's emotional experiencing and dictates preschool teacher's behavior and responses. Recognizing a child's success or progress with a positive feedback, furthermore encourage a child to deal with greater challenges. But we must not also overlook the importance of the preschool teacher's trust in a child and his abilities. It's a simple motivation like "I know you can do it!" or "Look how well you have performed the last task!" and gradually upgrading the complexity of the physical challenges that improves the child's self-confidence in his own body and his abilities.

Conclusion. We could say that movement in early childhood is an important factor that contributes to the development of a child's personality and therefore also the role of preschool teacher in this process. Good physical self-conception gained in early childhood can have a significant impact on the way of dealing with challenges, successes and failures in other areas of life. So, let's allow a child to discover himself and his abilities and provide him support and encouragement when needs be.

Key words: child holistic development, physical self-conception, positive feedback, preschool teacher's role

GIBANJE IN OTROKOVA SAMOPODOBA

Izhodišča. Pozitivne izkušnje zgodnjega otroštva oblikujejo temelje vseživljenjskega učenja. Otrok z gibanjem pridobiva zaupanje v lastno telo in s premagovanjem gibalnih izzivov razvija pozitivno samopodobo. Otrokov

razvoj poteka celostno in sočasno na različnih področjih. Aktivnost otroka v prvih letih življenja tako ni le podlaga za motorični razvoj, ampak vpliva tudi na telesni, spoznavni, čustveni in socialni razvoj ter pozitiven odnos do gibanja in gibalnih dejavnosti.

Problem. Gibalne dejavnosti so še posebej ključnega pomena za otroka v zgodnjem otroštvu in s tem tudi vloga vzgojitelja pri načrtovanju le-teh. Pri predšolskih otrocih, še posebej prvega starostnega obdobja (1–3 let), lahko govorimo predvsem o telesni samopodobi, ki je osnova za oblikovanje drugih sestavin samopodobe. Opaziti je, da so gibalno spretnejši otroci bolj samozavestni in izkazujejo večje zaupanje v lastno telo in sposobnosti ter imajo posledično boljšo samopodobo, zato se lažje spopadajo z gibalnim izzivi in iščejo tudi lastne načine za reševanje gibalnih problemov. Nasprotno pa se gibalno manj spretni otroci navadno izogibajo različnih, po njihovem mnenju pretežkih, gibalnih izzivov zaradi slabše telesne samopodobe.

Metode. Vloga vzgojitelja, tako ni le ponujati spodbudno fizično okolje (npr. igrišče, telovadnico, naravno okolje in uporabo raznolikih športnih rekvizitov), ampak tudi pozitivno povratno informacijo, ki otroka spodbuja k preseganju njegovih trenutnih zmožnosti (obstoječa raven razvoja).

O zoni bližnjega razvoja tako lahko govorimo takrat, ko otroku omogočimo, da doseže tisto nekaj več ob podpori odraslega/vzgojitelja, z usmerjanjem in s spodbudami ob pravem času in pravi količini. Zato je neizbežno opazovanje otroka pri reševanju gibalnih problemov in spremljanje njegovega odzivanja ter zapisovanje opažanj. To so pomembne informacije za načrtovanje nadaljnjega pedagoškega dela. Opazovanje povečuje naše razumevanje otroka in bogati kurikulum, zbrano pa nam omogoča tudi kvalitetnejšo izmenjavo informacij in bolj poglobljen pogovor s starši.

Ugotovitve. Ugotavljamo, da je vloga vzgojitelja v procesu učenja za otroka zato zelo pomembna. Ob spremljanju otrokovega napredka v okviru gibalnih dejavnosti smo opazili, da otrok ob uspešno premaganem gibalnem izzivu vidno doživlja zadovoljstvo (nasmeh, sproščena drža itn.). Spremljanje govornice telesa pri otroku ponuja vzgojitelju veliko informacij o otrokovem čustvenem doživljanju in narekuje vzgojiteljevo ravnanje in odzivanje.

Prepoznavanje otrokovega uspeha ali napredka, ki je podkrepljeno s pozitivno povratno informacijo, otroka še dodatno spodbudi k premagovanju zanj zahtevnejših gibalnih izzivov. Ne smemo pa spregledati pomembnosti

vzgojiteljevega zaupanja v otroka in njegove sposobnosti. Že preproste spodbude kot npr.: »Jaz vem, da ti to zmoreš!" ali "Poglej, kako dobro si opravil prejšnjo nalogo!" in ob postopnem nadgrajevanju kompleksnosti gibalnih izzivov, raste tudi otrokovo samozaupanje v lastno telo in sposobnosti.

Zaključek. Lahko bi rekli, da je gibalna dejavnost v zgodnjem otroštvu pomemben sooblikovalec otrokove osebnosti in prav tako vloga vzgojitelja v tem procesu. Prav dobra telesna samopodoba pridobljena v zgodnjem otroštvu, lahko pomembno vpliva na uspešnost spoprijemanja z izzivi, uspehi in neuspehi tudi na drugih področjih življenja. Torej, dovolimo otroku, da preizkuša sam sebe in svoje sposobnosti ter mu nudimo podporo in spodbudo, ko jo potrebujejo.

Ključne besede: celostni otrokov razvoj, telesna samopodoba, povratna informacija, vloga vzgojitelja

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SWIMMING CAMP FOR SECOND GRADERS

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The basis. pupils successfully pass a swimming test according to their individual competences and physical education syllabus for second class.

Anticipated problems. being away from home, it lasts several days, trying to become more independent.

Methods. For the tenth time in a row, our primary school has organised a four-day swimming camp in Ptuj for our second graders who take a 20-hour course in swimming according to their individual competences and physical education syllabus. Apart from all the activities in the swimming pool, there is a variety of other mostly outdoor activities. With these we try to make the days as active as possible to distract children who could otherwise become homesick as this is our first camp that lasts more than one day. We are more than aware we have to make an effort and prepare an enjoyable camp to pave the way for other camps later on, which we certainly do in Ptuj. Children are acquainted with old Roman games and try out sword fighting with the help of kind employees of Ptuj Spa. We also visit the golf course where kids get to know golf basics. We visit Dejan Zavec Gym, a boxing gym, where the famous boxer Dejan Zavec always greets us and kids can box with him in the ring. A walking trip to Ptuj is organised and on the way we explain all the characteristics and traditions of the oldest Slovene city. In the evenings children take part in different sports games and dancing. They also put on a short dancing performance. We have a picnic and social evening with Rogoznica kurents who prepare a short introduction and children in return a short dance performance. Each year Ptujko, our bear mascot, joins us and children write letters to him about their well-being, if they have problems and on the other hand things they like. It is a good way to avoid snitching. Pupils live in mobile houses and bungalows. They get special instructions so that they can organise themselves and become more independent. Each house gets three instruction cards where they find out what they need for swimming, before

and after, and for the Ptuj walking trip. They choose a leader who reads the instructions and checks their backpacks. A leader can be the same person or they choose a new one every day. The main aim of the camp is not just physical activity but also becoming more independent, responsible, tolerant, improving their self-image and last but not least, socialising with their peers.

Findings. Our analysis shows that children progress significantly, both in their motoric abilities as well as in their social-emotional development. All the planned goals are reached, all pupils get better at swimming and being away from home does not present any difficulties.

Conclusion. At the end of every camp children are always content and proud of their achievements and what they are able to do independently. Most of all, they are happy about their improved swimming capabilities, how they are able to prepare all the things needed, clean after themselves, pack their luggage and have fun without their parents. Feedback from parents is always positive and they are proud of their 7-year-olds who spend a few days away from home.

Key words: swimming, outdoor activities, syllabus, socialising, independence

PLAVALNI TABOR ZA DRUGOŠOLCE

Izhodišče. učenci uspešno opravijo plavalno opismenjevanje v 2. razredu.

Problem. oddaljenost od doma, večdnevni tabor, navajanje na samostojnost.

Metode. Na Osnovni šoli Naklo že deseto leto organiziramo štiridnevni plavalni tabor za drugošolce na Ptuju, kjer učenci opravijo 20-urno plavalno opismenjevanje pri predmetu šport. Poleg dejavnosti v vodi učencem pripravimo bogat spremljevalni program, ki ga želimo predstaviti. S programom zapolnimo dneve in se s tem izognemo domotožju, saj je to prvi večdnevni tabor za naše učence. Zavedamo se, da jim moramo priljubiti prvi tabor, kar je dobra naložba za tabore v višjih razredih, in to nam na Ptuju zagotovo uspe. Seznanimo jih s starimi rimskimi igrami, kjer se učenci urijo tudi v mečevan-

ju s pomočjo animatorjev Term Ptuj. Obiščemo golf igrišče, kjer na vadbišču lahko vsak otrok spozna osnove golfa. Obiščemo Dejan Zavec Gym, vadbeni center boksa, kjer se srečamo z Dejanom Zavcem. Otroci imajo vadbeno uro boksa in se s svetovnim boksarskim prvakom pomerijo tudi v ringu. Pripravimo jim izlet v mesto Ptuj, kamor se odpravimo peš. Predstavimo jim značilnosti in običaje mesta. Ob večerih organiziramo športne igre in ples. Izvedemo tudi plesni nastop. Organiziramo piknik in večer druženja s kurenti iz Rogoznice, ki se nam predstavijo, mi pa jim pripravimo plesni nastop. S seboj imamo maskoto, medveda Ptujka, kateremu otroci pišejo pisma o svojem počutju na Ptuj, mu zaupajo težave in pohvale. S tem se izognemo tudi tožarjenju. Učenci bivajo v mobilnih hiškah in bungalovih. Za dobro organizacijo v posameznih hiškah pripravimo navodila, ki učencem pomagajo pri samostojnosti. Vsaka hiška ima 3 kartončke s kratkimi navodili, kaj pripraviti pred in po kopanju ter za izlet na Ptuj. Učenci določijo vodjo hiške, ki prebere navodila in preveri nahrbtnike. Vodja je lahko ves čas eden od učencev, lahko se menjajo po dnevih. Poleg gibanja so namreč zelo pomembni cilji tabora: razvijanje samostojnosti, odgovornosti, strpnosti in pozitivne samopodobe ter druženje z vrstniki.

Ugotovitve. Ugotavljamo, da učenci na taboru zelo napredujejo, tako na motoričnem kot na čustveno-socialnem področju. Vsi zastavljeni cilji so doseženi, vsi učenci napredujejo v plavanju, oddaljenost od doma ne predstavlja problema.

Zaključek. Učenci so zadovoljni in ponosni na to, kaj vse znajo in zmorejo sami. Najbolj so ponosni na svoje dosežke v vodi. Zelo so zadovoljni, ko v praksi spoznajo, da zmorejo sami pripraviti pripomočke pred kopanjem, pospraviti po kopanju, da znajo sami pospraviti prtljago in da se zabavajo tudi brez staršev. S strani staršev dobimo veliko pozitivnih povratnih informacij o taboru na Ptuj. Ponosni so na svoje sedemletnike, ki zadovoljni preživijo nekaj dni od doma.

Ključne besede: plavanje, gibanje, program, druženje, samostojnost

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LEARNING THROUGH MOVEMENT

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Basic premise. Directed movements lead to learning with ease in population of children with Attention Deficit and Hyperactivity Disorder (ADHD), behavioral and learning disabilities (dysgraphia, dyslexia)

Problem. The lack of movement during classes at school affects the teaching attendance, adoption of materials, internal dissatisfaction which sometimes result in aggression and other forms of undesirable behavior

Methods. We used Brain Gym® program activities, scene and role play, games, music and different didactic materials (tactile boards, balance board, tactile balls, balloons, water pencils, crayons, board games). We used movement activities in every day work, combined and implemented them in our teaching contents in population of children from the 1st to the 4th grade/elementary school/.

Results. Movement, as our natural way of learning, is very important for children, especially for children with ADHD and other disabilities. Children move a lot and learn through play and movements with ease. It's an interesting and acceptable way of learning for children. Children who took part in our program activities improved in their learning skills (writing, reading), attention and concentration, expressing emotions and social relationship.

Conclusion. Results of monitoring pupils' achievements will be presented in details on the poster at the congress. They show positive effects of learning through movement on children's attention, concentration and readiness for learning in population of children with ADHD and other behavioral and learning disabilities who participate in these activities throughout the schoolyear.

Key words: ADHD, learning disabilities, Brain Gym® activities, positive effects

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