

Book of Summaries



**14 MEĐUNARODNA
KONFERENCIJA
"SPORTSKE NAUKE I
ZDRAVLJE"**

*14th INTERNATIONAL
CONFERENCE ON "SPORTS
SCIENCE AND HEALTH"*

suorganizatori:



KAZAKH NATIONAL PEDAGOGICAL
UNIVERSITY ABAI



FAKULTET ZA SPORT I TURIZAM





14 MEĐUNARODNA
KONFERENCIJA "SPORTSKE
NAUKE I ZDRAVLJE"
14th INTERNATIONAL
CONFERENCE ON "SPORTS
SCIENCE AND HEALTH"

14-15. 03. 2024.

Zbornik Sažetaka

Book of Summaries

organizatori:



pokrovitelji:



- MINISTARSTVO ZDRAVLJA I SOCIJALNE ZAŠTITE RS
- MINISTARSTVO NAUKE I TEHNOLOGIJE RS
- MINISTARSTVO PORODICE, OMLADINE I SPORTA RS

- AKADEMIJA NAUKA I UMJETNOSTI RS



POČASNI ODBOR:

RAJKO Kuzmanović
ESAD Jakupović DARKO
Uremović

TEHNIČKA PODRŠKA:

Srboljub Vuković, Božić Darko,
Sretko Bojić, Siniša Tomić,
Radovan Vučenović,
Marko Milovanović, Aleksa
Marčeta

ORGANIZACIONI ODBOR:

Velibor Srdić, predsjednik
Siniša Aleksić, potpredsjednik
Srboljub Vuković, sekretar
Marijana Petković, PR
Aleksandar Naumovski, Makedonija
Bogoljub Antonić, Bosna i Hercegovina
Bojan Kozomara, Bosna i Hercegovina
Branimir Mikić, Bosna i Hercegovina
Branislav Mihajlović, Bosna i Hercegovina
Dragan Joksović, Srbija
Duško Bjelica, Crna Gora
Goran Bošnjak, Bosna i Hercegovina
Igor Jukić, Hrvatska
Ljudmil Petrov, Bugarska
Nikolaos Oxizoglou, Grčka
Pane Mandić, Bosna i Hercegovina
Veselin Bunčić, Srbija

NAUČNI ODBOR:

Aleksandar Milić, Bosna i Hercegovina
Bojanka Peneva, Bugarska
Danko Pržulj, Bosna i Hercegovina
Dejan Madić, Srbija
Dobrica Živković, Srbija
Đorđe Nićin, Bosna i Hercegovina
Đorđe Okanović, Srbija
Goran Oreb, Hrvatska
Gordana Radić, Bosna i Hercegovina
Izet Rađo, Bosna i Hercegovina
Jovan Ćulum, Bosna i Hercegovina
Jovo Radoš, Srbija
Kemal Idrizović, Crna Gora
Meta Zagorc, Slovenija
Milan Nešić, Srbija
Milorad Balaban, Bosna i Hercegovina
Milovan Bratić, Srbija
Muriz Hadžikadunić, Bosna i Hercegovina
Osmo Bajrić, Bosna i Hercegovina
Senad Bajrić, Bosna i Hercegovina
Slavica Lukić, Bosna i Hercegovina
Slobodan Goranović, Bosna i Hercegovina
Slobodan Simović, Bosna i Hercegovina
Velimir Vukajlović, Bosna i Hercegovina
Višnja Đorđić, Srbija
Zoran Arsović, Bosna i Hercegovina
Žarko Kostovski, Makedonija
Živorad Maličević, Srbija

CONTENTS

RAZLIKE KINEMATIČKIH PARAMETARA KARATISTA IZVEDBOM KSAT-TESTA U ODNOSU NA OPŠTU AEROBNU IZDRŽLJIVOST	7
Dragiša Jovanović, Osman Lačić, Jasmin Bilalić, Eldar Goletić, Mladen Pavlinović	
DIFFERENCES IN KINEMATIC PARAMETERS OF KARATE PLAYERS PERFORMING THE KSAT-TEST IN RELATION TO GENERAL AEROBIC ENDURANCE	
INTERKORELACIJE MORFOLOŠKIH KARAKTERISTIKA UČENIKA MLAĐEG ŠKOLSKOG UZRASTA	9
Zoran Momčilović, Vladimir Momčilović	
MORPHOLOGICAL CHARACTERISTIC INTERCORRELATIONS OF YOUNG SCHOOLCHILDREN	
TRANSFORMACIONI PROCESI MOTORIČKIH SPOSOBNOSTI UČENIKA MLAĐEG ŠKOLSKOG UZRASTA	10
Vladimir Momčilović, Zoran Momčilović	
TRANSFORMATION PROCESSES IN THE MOTOR SKILLS OF YOUNG SCHOOLCHILDREN	
COMPREHENSION OF THE IMPACT OF SITTING VOLLEYBALL UTILITY IN TERMS OF PERFORMANCE AND INCLUSION	11
Rosario Ceruso	
EFEKTI HODANJA NA SMANJENJE TELESNE TEŽINE	12
Vladimir Toljaga	
EFFECTS OF WALKING ON WEIGHT REDUCTION	
INFLUENCE OF PASSIVE SMOKING ON RESPIRATORY FUNCTION IN YOUNG ATHLETES	13
Marko Erceg, Dario Vrdoljak, Nikola Foretić, Ante Rađa, Antonela Karmen Ivišić	
ANALIZA KVANTITATIVNIH PROMJENA U PROSTORU ISTRAŽIVANIH MOTORIČKIH SPOSOBNOSTI KOD MLADIH KOŠARKAŠICA	14
Mile Galić, Azer Korjenić, Ante Vučić, Alem Kukić	
ANALYSIS OF QUANTITATIVE CHANGES IN SCOPE OF THE RESEARCHED MOTOR SKILLS OF YOUNG BASKETBALL PLAYERS	
HAGLUNDOV SINDROM KOD NOGOMETAŠA- FIZIOTERAPEUTSKI PRIKAZ SLUČAJA	15
Elvir Gosić, Sandro Ugrina, Iva Lončarić Kelečić	
HAGLUND'S SYNDROME IN FOOTBALL PLAYERS - PHYSIOTHERAPEUTIC CASE REPORT	
MISIČNO-KOŠTANE OZLJEDE KOD NOGOMETAŠA I RUKOMETAŠA U HRVATSKOJ-PILOT OPSERVACIJSKA STUDIJA	16
Elvir Gosić, Hrvoje Vlahović, Iva Lončarić Kelečić	
MUSCULOSKELETAL INJURIES IN FOOTBALL AND HANDBALL PLAYERS IN CROATIA - A PILOT OBSERVATIONAL STUDY	
POTICANJE DODATNE FIZIČKE AKTIVNOSTI NA OTVORENOM KOD DJECE PREDŠKOLSKOG UZRASTA	18
Zorica Stankovska, Ivan Malcev	
ENCOURAGING ADDITIONAL PHYSICAL ACTIVITY OUTDOORS IN PRESCHOOL-AGED CHILDREN	
COMPLICATION OF DISTANCES BY INTRODUCING SECTIONS WITH DIFFERENT ENVIRONMENTAL CONDITIONS FOR INCREASING THE ENTERTAINMENT OF MARATHON SWIMMING	20
Egor M. Shchelkanov, Edward A. Chibrikov, Sergei A. Yakushin, Vladimir M. Bobylev	
THE LONG-TERM IMPACT ON ANKLE-BRACHIAL INDEX FROM LOW INTENSITY RESISTANCE EXERCISE WITH BLOOD FLOW RESTRICTION TECHNIQUE: A SYSTEMATIC REVIEW	21
Ratanyoo Longrak	
RAPID WEIGHT LOSS PRACTICES IN ELITE YOUTH WRESTLERS; THE SOURCES OF INFLUENCE AND METHODS USED	22
Krešo Škugor, Ante Škugor, Barbara Gilić	
NEW METHODS IN SPORTS PSYCHOLOGY TRAINING: MENTAL MOMENTUM METHOD IN ROWING – A CASE STUDY	23
Marijana Mladenović	

THE EFFECTS OF QI GONG AND MOTOR IMAGERY TRAINING ON FIBROMYALGIA	24
Roberto Fagnani	
EFFECT OF CROSS TRAINING ON PHYSICAL FITNESS AND BODY COMPOSITION AMONG RECREATIONAL ATHLETES MEASURED WITH BIO IMPEDANCE AND MODERN HEART RATE MONITORING SYSTEM	25
Iskra Bojadjeva Kitancheva, Zarko Kostovski	
RAZLIKE U ZASTUPLJENOSTI POSTURALNIH POREMEĆAJA KIČMENOG STUBA KOD UČENIKA NIŽIH RAZREDA OSNOVNE ŠKOLE	26
Senad Bajrić, Aida Bačić Bajrić, Osmo Bajrić, Gordan Bajić	
DIFFERENCES IN THE REPRESENTATION OF POSTURAL DISORDERS OF THE SPINAL COLUMN IN PRIMARY SCHOOL STUDENTS	
PERCEPCIJA TUMAČENJA RANOG PREPOZNAVANJA I PODRŠKE SPORTSKI NADARENIH UČENIKA	28
Osmo Bajrić, Velibor Srdić, Senad Bajrić, Adem Preljević	
PERCEPTION OF THE INTERPRETATION OF EARLY RECOGNITION AND SUPPORT OF SPORTS GIFTED STUDENTS	
"WONDER M.ARTS," DEVELOPMENT OF WOMEN'S EMPOWERMENT THROUGH MARTIAL ARTS	29
Giuseppe Giardullo	
SPORT U FUNKCIJI DJECE I MLADIH	30
Virna Čehić, Anita Zovko	
SPORTS IN THE FUNCTION OF CHILDREN AND YOUNG PEOPLE	
RELATION OF BLOOD PARAMETERS AND NIRS-DERIVED HEMOGLOBIN; PRELIMINARY STUDY IN YOUTH SPORT CLIMBERS	31
Dario Vrdoljak	
ANALIZA STRUKTURE SOMATSKIH ODLIKA KOŠARKAŠA KADETSKOG UZRASTA	32
Alem Kukić, Munir Talović, Mile Galić	
ANALYSIS OF THE STRUCTURE OF SOMATIC CHARACTERISTICS OF BASKETBALL PLAYERS OF CADET AGE	
FAKTORSKA STRUKTURA MOTORIČKOG PROSTORA KOŠARKAŠA UZRASTA 12 – 14 GODINA	34
Alem Kukić, Munir Talović, Aleksa Stanković	
FACTOR STRUCTURE ANALYSIS OF THE MOTOR CAPACITIES OF BASKETBALL PLAYERS AGES 12–14	
RAZLIKE U STAVOVIMA NASTAVNIKA O RAZVOJNO PRIMJERENIM STRATEGIJAMA PODRŽAVANJA NADARENIH UČENIKA U SPORTU	36
Osmo Bajrić, Senad Bajrić, Velibor Srdić	
DIFFERENCES IN TEACHERS' ATTITUDES ON DEVELOPMENTALLY APPROPRIATE STRATEGIES FOR SUPPORTING GIFTED STUDENTS IN SPORTS	
KOMPARATIVNA ANALIZA PRIMARNIH MOTORIČKIH SPOSOBNOSTI UČENIKA MLAĐEG ŠKOLSKOG UZRASTA	38
Mara Banjac, Mihajlo Mijanović	
COMPARATIVE ANALYSIS OF PRIMARY MOTOR SKILLS OF YOUNGER SCHOOL AGE	
EFEKTI PLIOMETRIJSKOG VJEŽBANJA NA EKSPLOZIVNU SNAGU DONJIH EKSTREMITETA MLADIH SPORTISTA	40
Srećko Stanišić, Srbojub Vuković, Ilija Stijepić	
THE EFFECTS OF PLYOMETRIC TRAINING ON THE EXPLOSIVE POWER OF THE LOWER EXTREMITIES OF YOUNG ATHLETES	
UTICAJ GRUPNIH FITNES PROGRAMA NA TJELESNU KOMPOZICIJU ŽENA	41
Srećko Stanišić, Sara Lučić, Srbojub Vuković	
INFLUENCE OF GROUP FITNESS PROGRAMS ON WOMEN'S BODY COMPOSITION	
PRIMENA DOZIRANOG FIZIČKOG OPTEREĆENJA KOD POVREDA KOLENA	42
Malin Drašković, Ognjen Delić, Vesko Drašković	
APPLICATION OF DOSED PHYSICAL EXERCISE FOR KNEE INJURIES	

RAZLIKE PARAMETARA ZA PROCJENU NEKIH MORFOLOŠKIH KARAKTERISTIKA I SASTAVA TIJELA KOD STUDENTICA UNIVERZITETA U TUZLI	43
Kada Delić Selimović, Belmin Bujaković, Indira Jašarević	
DIFFERENCES IN PARAMETERS FOR ASSESSING SOME MORPHOLOGICAL CHARACTERISTICS AND BODY COMPOSITION AT THE FEMALE STUDENTS OF THE UNIVERSITY IN TUZLA	
CORRELATION BETWEEN RESULTS OF FALL RISK ASSESSMENT TOOLS AND BODY MASS INDEX IN THE ELDERLY POPULATION	44
Lidija Slunjski Tišma, Ilija Stijepić	
FIZIČKO VEŽBANJE U SLUŽBI LEPOTE TELA I DUŠE	45
Vladan Vođević, Aleksandar Gadžić, Srboj Vuković	
PHYSICAL EXERCISE IN THE SERVICE OF THE BEAUTY OF BODY AND SOUL	
NIVO FIZIČKE AKTIVNOSTI I KVALITETA SNA KOD OSOBA LEČENIH HRONIČNIM HEMODIJALIZAMA	47
Sanja Stanimirović, Ljubica Ristanović, Jasna Trbojević Stanković	
LEVEL OF PHYSICAL ACTIVITY AND QUALITY OF SLEEP IN PERSONS TREATED WITH CHRONIC HEMODIALYSIS	
ULOGA FIZIČKOG VASPITANJA U SMANJENJU ADHD SINDROMA KOD DJECE ŠKOLSKOG UZRASTA	48
Olivera Krivokapić	
THE ROLE OF PHYSICAL EDUCATION IN REDUCING ADHD SYNDROME IN SCHOOL-AGE CHILDREN	
ANALIZA ZNAČAJA RAZLIKA MENADŽERA RAZLIČITIH FUNKCIONALNIH KOMPETENCIJA U SPORTSKIM KLUBOVIMA.	49
Dženan Šuta, Damir Đedović, Goran Grahovac	
ANALYSIS OF THE SIGNIFICANCE OF THE DIFFERENCES OF MANAGERS WITH DIFFERENT FUNCTIONAL COMPETENCES IN SPORTS CLUBS	
METODSKI POSTUPCI I KORIŠTENJE PLIVAČKIH POMAGALA U OBUCI DJECE NEPLIVAČA UZRASTA 8-9 GODINA	50
Stefan Čavić, Senad Bajrić	
METHODOLOGICAL PROCEDURES AND THE USE OF SWIMMING IN THE TRAINING OF CHILDREN NON-SWIMMER AGE 8-9 YEARS OLD	
TAKTIKA INDIVIDUALNIH POSTUPAKA ODOJKAŠA U FAZI KOMPLEKSA IGRE K1	52
Sara Obradović, Darko Božić	
ACTICS OF INDIVIDUAL PROCEDURES OF VOLLEYBALL PLAYERS IN THE COMPLEX PHASE OF THE GAME K1	
CHANGING THE MENTALITY FOR PEOPLE WITH LIMITED ABILITIES THROUGH SPORTS.....	53
Gentijana Pačarizi, Xheneta Jashari, Nedeljko Stanković	
DIFFERENCES IN SOME ANTHROPOMETRIC AND MOVEMENT SKILLS MEASUREMENTS IN YOUNG BASKETBALL AND VOLLEYBALL PLAYERS	54
Fatbardh Ajvazi, Fatmir Pireva, Ardita Pireva	

RAZLIKE KINEMATIČKIH PARAMETARA KARATISTA IZVEDBOM KSAT-TESTA U ODNOSU NA OPŠTU AEROBNU IZDRŽLJIVOST

Dragiša Jovanović¹, Osman Lačić², Jasmin Bilalić², Eldar Goletić², Mladen Pavlinović³

¹ Nezavisni istraživač, Modriča, Bosna i Hercegovina

² Fakultet za tjelesni odgoj i sport, Univerzitet u Tuzli, Bosna i Hercegovina

³ Nezavisni istraživač, Tuzla, Bosna i Hercegovina

SAŽETAK

Cilj istraživanja je da se utvrde kinematički parametri udaraca rukama i nogama u situacijskim uslovima u karateu (Ksat-test) te detektuju razlike u manifestaciji tih udaraca kao efekti zamora u odnosu na opštu aerobnu izdržljivost kadeta i juniora. Praćeni su kinematički parametri udaraca koji se najčešće pojavljuju kao poentirajuće tehnike: kizama zuki, mavaši geri, đaku zuki, aši mavaši geri. Snimanje je obavljeno VHS kamerama, a određivanje kinematičkih parametara je urađeno u programu Kinovea 0.8.15. Uzorak ispitanika predstavljaju takmičari juniorske i kadetske kategorije, članovi klubova sa područja Zeničko-dobojskog kantona, Tuzlanskog kantona i Regionalnog karate saveza BMSiP sa ukupnim brojem od 30 entiteta. Varijable kinematičkih parametara su: Visina težišta tijela u pripremnoj fazi, Ugao u zglobu lakta prednje ruke u pripremnoj fazi, Ugao u zglobu lakta zadnje ruke u pripremnoj fazi, Ugao između nogu u pripremnoj fazi, Brzina udarca prednje ruke - kizame zuki, Visina udarca prednje ruke - kizame zuki, Brzina udarca zadnje noge - mavaši geri, Visina udarca zadnje noge - mavaši geri, Brzina udarca zadnje ruke - đaku zuki, Visina udarca zadnje ruke - đaku zuki, Brzina udarca prednje noge - aši mavaši geri, Visina udarca prednje noge - aši mavaši geri. Varijabla opšte aerobne izdržljivosti je ŠATL20 – VO_2max .

U obje kategorije sa ukupno 30 entiteta izvršena je kvartilna podjela na osnovu maksimalne potrošnje kiseonika (VO_2max) sa vrijednostima I kvartila od 37.73 $\text{mlO}_2/\text{kg}/\text{min.}$, (Slabija grupa) i III kvartila sa 47.18 $\text{mlO}_2/\text{kg}/\text{min.}$, (Bolja grupa). Sumarno u obje kategorije na multivarijatom nivou desile statistički značajne razlike u kinematičkim parametrima između Bolje i Slabije grupe na osnovu maksimalne potrošnje kiseonika (VO_2max). Na univarijatom nivou došlo je do signifikantnih razlika u 7 kinematičkih parametara. U kategoriji juniora između klasifikovanih grupa i na multivarijatom i na univarijatom nivou došlo je do statistički značajnih razlika. Od ukupno 12 kinematičkih varijabli do signifikantnih razlika došlo je kod njih 7. U kategoriji kadeta na multivarijatom nivou nije došlo do statistički značajnih razlika. Na univarijatom nivou desila se značajna razlika samo kod jedne kinematičke varijable a to je brzina udarca prednje ruke – kizame zuki, koja je zanemariva za multivarijatan nivou i nije uticala na globalne razlike.

Ključne riječi: Karatisti, kinematički parametri, Ksat-test, opšta aerobna izdržljivost.

DIFFERENCES IN KINEMATIC PARAMETERS OF KARATE PLAYERS PERFORMING THE KSAT-TEST IN RELATION TO GENERAL AEROBIC ENDURANCE

Dragiša Jovanović¹, Osman Lačić², Jasmin Bilalić², Eldar Goletić², Mladen Pavlinović³

¹ Independent researcher, Modriča, Bosnia and Herzegovina

² Faculty of Physical Education and Sports, University of Tuzla, Bosnia and Herzegovina

³ Independent researcher, Tuzla, Bosnia and Herzegovina

ABSTRACT

The goal of the research is to determine the kinematic parameters of kicks and kicks in situational conditions in karate (Ksat-test) and to detect differences in the manifestation of these kicks as fatigue effects in relation to the general aerobic endurance of cadets and juniors. The kinematic parameters of the blows that most often appear as scoring techniques were monitored: kizama zuki, mawashi geri, ōdō zuki, ashi mawashi geri. The recording was done with VHS cameras, and the determination of kinematic parameters was done in the Kinovea 0.8.15 program. The sample of respondents is represented by junior and cadet category competitors, members of clubs from the area of Zenica-Doboj Canton, Tuzla Canton and the Regional Karate Association BMSiP with a total number of 30 entities. The variables of the kinematic parameters are: Height of the center of gravity of the body in the preparatory phase, Angle in the elbow joint of the front arm in the preparatory phase, Angle in the elbow joint of the back arm in the preparatory phase, Angle between the legs in the preparatory phase, Speed of the front hand kick - kizame zuki, Height of the front kick hands - kizame zuki, Back leg kick speed - mawashi geri, Back leg kick height - mawashi geri, Back hand kick speed - djaku zuki, Back hand kick height - djaku zuki, Front leg kick speed - ashi mawashi geri, Front leg kick height - ashi mawashi geri. The general aerobic endurance variable is ŠATL20 – VO₂max.

In both categories with a total of 30 entities, a quartile division was made on the basis of maximum oxygen consumption (VO₂max) with values of the I quartile of 37.73 mlO₂/kg/min., (Weaker group) and the III quartile with 47.18 mlO₂/kg/min., (Better group). In summary, statistically significant differences in kinematic parameters between the Better and Weaker groups based on maximum oxygen consumption (VO₂max) occurred in both categories at the multivariate level. At the univariate level, there were significant differences in 7 kinematic parameters. In the junior category, there were statistically significant differences between the classified groups at both the multivariate and univariate levels. Of a total of 12 kinematic variables, there were significant differences in 7 of them. In the cadet category, there were no statistically significant differences at the multivariate level, which is negligible for the multivariate level and did not affect the global differences.

Key words: Karate athletes, kinematic parameters, Ksat-test, general aerobic endurance.

INTERKORELACIJE MORFOLOŠKIH KARAKTERISTIKA UČENIKA MLAĐEG ŠKOLSKOG UZRASTA

Zoran Momčilović, Vladimir Momčilović

Pedagoški fakultet u Vranju, Univerzitet u Nišu, Srbija

APSTRAKT

Autori u ovom radu predstavljaju interkorelacije morfoloških karakteristika učenika mlađeg školskog uzrasta dobijene primenom i uticajem programa vežbanja koordinacije i brzine. Uzorak ispitanika činili su učenici osnovnih škola, uzrasta 9 i 10 godina (± 6 meseci) u Nišu. Uzorak od 64 ispitanika podeljen je u dve grupe, eksperimentalnu i kontrolnu grupu, po 32 ispitanika u svakoj grupi. Ispitanici eksperimentalne grupe bili su uključeni u proces vežbanja koordinacije i brzine u dodatnoj nastavi fizičkog vaspitanja dok su ispitanici kontrolne grupe bili uključeni samo u redovnu nastavu fizičkog vaspitanja. U radu su predstavljeni osnovni statistički parametri ispitanika eksperimentalne i kontrolne grupe na inicijalnom i na finalnom merenju kao i interkorelacione matrice eksperimentalne i kontrolne grupe na inicijalnom i finalnom merenju morfološkim karakteristikama. Kod ispitanika eksperimentalne grupe na inicijalnom merenju najveću korelaciju imaju antropometrijske mere obim nadlaktice (AONDL) i obim podkolenice (AOPTK) dok na finalnom merenju najveću korelaciju imaju antropometrijske mere kožni nabor nadlaktice (ANNAD) i kožni nabor podkolenice (ANPTK). Kod ispitanika kontrolne grupe na inicijalnom merenju najveću korelaciju imaju antropometrijske mere obim grudnog koša (AOGR) i obim podkolenice (AOPTK) dok na finalnom merenju najveću korelaciju imaju antropometrijske mere obim nadlaktice (AONDL) i obim podkolenice (AOPTK).

Ključne reči: interkorelacije, morfološke karakteristike, mlađi školski uzrast, koordinacija, brzina

MORPHOLOGICAL CHARACTERISTIC INTERCORRELATIONS OF YOUNG SCHOOLCHILDREN

Zoran Momčilović, Vladimir Momčilović

Pedagogical faculty in Vranje, University of Niš, Serbia

ABSTRACT

In this paper, the authors presented a study aimed at determining the impact of coordination and speed training programs on morphological characteristics of young schoolchildren in additional PE classes. The sample of respondents included primary school pupils from Niš, aged 9 and 10 (± 6 months). The sample of 64 respondents was divided into two groups, an experimental and control group, 32 pupils in each group. The respondents of the experimental group were involved in the training process of exercising coordination and speed in additional physical education classes, while the control group was involved only in regular physical education classes. The paper presents the basic statistical parameters of respondents in the experimental and control groups at the initial and final measurements, as well as the intercorrelation matrices of the experimental and control groups at the initial and final measurements with morphological characteristics. With respondents in the experimental group at the initial measurement, the highest correlation is observed between the anthropometric measurements of mid-upper arm circumference (AONDL) and calf circumference (AOPTK), whereas at the final measurement, the highest correlation is observed between the anthropometric measurements of mid-upper arm skinfold (ANNAD) and calf skinfold (ANPTK). With respondents in the control group at the initial measurement, the highest correlation is observed between the anthropometric measurements of chest circumference (AOGR) and calf circumference (AOPTK), whereas at the final measurement, the highest correlation is observed between the anthropometric measurements of mid-upper arm circumference (AONDL) and calf circumference (AOPTK).

Keywords: intercorrelations, morphological characteristics, young schoolchildren, coordination, speed.

TRANSFORMACIONI PROCESI MOTORIČKIH SPOSOBNOSTI UČENIKA MLAĐEG ŠKOLSKOG UZRASTA

Vladimir Momčilović, Zoran Momčilović

Pedagoški fakultet u Vranju, Univerzitet u Nišu, Srbija

APSTRAKT

Uzorak ispitanika činili su učenici osnovnih škola, uzrasta 9 i 10 godina (± 6 meseci) u Nišu. Uzorak od 64 ispitanika podeljen je u dve grupe, eksperimentalnu i kontrolnu grupu, po 32 ispitanika u svakoj grupi. Ispitanici eksperimentalne grupe bili su uključeni u proces vežbanja koordinacije i brzine u dodatnoj nastavi fizičkog vaspitanja dok su ispitanici kontrolne grupe bili uključeni samo u redovnu nastavu fizičkog vaspitanja.

Rezultati diskriminativne analize motoričkih sposobnosti u finalnom u odnosu na inicijalno merenje kod eksperimentalne grupe ukazuju nam da je pod uticajem programa vežbanja koordinacije i brzine u dodatnoj nastavi fizičkog vaspitanja došlo do statistički značajnih transformacionih procesa motoričkih sposobnosti dece mlađeg školskog uzrasta i da najveći doprinos diskriminativnoj funkciji imaju koverta test (MKOZ 0.689), koraci u stranu (MKUS 0.677) i trčanje na 30 metara visokim startom (M30VS 0.601).

Ključne reči: transformacioni procesi, motoričke sposobnosti, mlađi školski uzrast, koordinacija, brzina

TRANSFORMATION PROCESSES IN THE MOTOR SKILLS OF YOUNG SCHOOLCHILDREN

Vladimir Momčilović, Zoran Momčilović

Pedagogical faculty in Vranje, University of Niš, Serbia

ABSTRACT

The sample of respondents included primary school pupils from Niš, aged 9 and 10 (± 6 months). The sample of 64 respondents was divided into two groups, an experimental and control group, 32 pupils in each group. The respondents of the experimental group were involved in the training process of exercising coordination and speed in additional PE classes, while the control group was involved only in regular PE classes. The results of the discriminant analysis of motor skills at the final compared to the initial measurement in the experimental group showed that the exercise program focusing on coordination and speed in additional physical education classes led to statistically significant transformational processes in the motor skills of young schoolchildren. The greatest contribution to the discriminant function comes from the envelope test (MKOT 0.689), aside steps (MKUS 0.677) and standing start running on 30 meters (M30VS 0.601).

Keywords: transformation processes, motor skills, young schoolchildren, coordination, speed.

COMPREHENSION OF THE IMPACT OF SITTING VOLLEYBALL UTILITY IN TERMS OF PERFORMANCE AND INCLUSION

Rosario Ceruso

Department of Neuroscience, Biomedicine and Movement. University of Verona, Via San Francesco 22, Verona, 37129, Italy

ABSTRACT

Background: The lack of internally sourced empirical data (internal stakeholders) limits the ability to assess the extent to which sitting volleyball can positively influence the physical abilities and perceptions of inclusion of people with disabilities. **Purpose:** The objective is to measure the impact of the utility of sitting volleyball in performative and inclusive terms in individuals with disabilities by the actors of the phenomenon themselves (internal stakeholders). **Methods:** The sample consists of 18 sitting volleyball athletes, aged 18 to 40 years. A questionnaire divided into sections was developed and administered: the first section includes questions on core stability, eye-hand coordination and lateralization; the second section focuses on the development of fundamentals; and the third section includes questions on inclusion. The Chi-square test was applied to analyze any significant relationships. **Results:** The results find that 38.9% find the use of Core Stability exercises very useful for performance purposes in sitting volleyball. In addition, 33.3% find moving exercises on the court extremely useful. 55.6 percent of the sample finds sitting volleyball extremely useful for inclusion purposes. The significant relationships are on the positive effect of on-court movement exercises with breaking down physical and mental barriers for inclusion ($p=0.024$); the usefulness of sitting volleyball for inclusion with the importance of on-court movements and ($p=0.041$). **Conclusion:** The data show that sitting volleyball remains an exemplary model of inclusion in the sports context. This study provides a solid foundation for the development of strategies aimed at improving the sports experience and promoting inclusion in sitting volleyball.

KeyWords: Sitting Volley, Inclusion, Core stability.

EFEKTI HODANJA NA SMANJENJE TELESNE TEŽINE

Vladimir Toljaga

ECNU Xiping Bilingual School, Xiamen, China

SAŽETAK

Cilj rada je bio da se prikažu rezultati koji se odnose na uticaj hodanja na smanjenje telesne težine gojaznih osoba na temelju analiziranih radova koji su objavljeni između 2011. i 2019. godine. Pretraživanje je izvršeno pomoću sledećih elektronskih baza: ResearchGate, Google Scholar i Academia. Radovi su odabrani na osnovu više kriterijuma: vrste studije, populacije i rezultata.

Rezultati analiziranih istraživanja su pokazali da hodaње može biti efikasno sredstvo za smanjenje telesne težine. Step en efikasnosti može zavisi ti od obima i intenziteta hodanja, što može biti dodatno unapređeno u kombinaciji sa vežbama opterećenja i regulisanom ishranom, i povećanjem motivacije hodanjem u grupi i korišćenjem pedometra.

Ključne reči: prekomerna težina, gojaznost, hoda nje, mršavljenje.

EFFECTS OF WALKING ON WEIGHT REDUCTION

Vladimir Toljaga

ECNU Xiping Bilingual School, Xiamen, China

ABSTRACT

The aim of this study was to present the results regarding the impact of walking on weight reduction in obese individuals based on the analyzed papers published between 2011 and 2019.

The search was conducted using the following electronic databases: ResearchGate, Google Scholar, and Academia. Papers were selected based on multiple criteria: study types, populations, and outcomes.

The results of the analyzed research showed that walking can be an effective means of weight reduction. The degree of effectiveness may depend on the duration and intensity of walking, which can be further enhanced by combining it with resistance exercises and regulated diet, as well as by increasing motivation through group walking and the use of pedometers.

Keywords: overweight, obesity, walking, weight loss

INFLUENCE OF PASSIVE SMOKING ON RESPIRATORY FUNCTION IN YOUNG ATHLETES

Marko Erceg, Dario Vrdoljak, Nikola Foretić, Ante Rađa, Antonela Karmen Ivišić

Faculty of Kinesiology, University of Split, Split, Croatia

ABSTRACT

The primary objective of this study is to outline the dynamics of respiratory function change in young athletes, as well as to determine the differences of alteration patterns between athletes-passive smokers (PS) and athletes not exposed to passive smoking in their families (NS). Respiratory and functional indicators have been measured in 117 young athletes (67 soccer players and 50 handball players) from Split (Croatia) by means of "Master Lab", an instrument designed for measuring pulmonary functions produced by the company Jaeger. Mean age of the test subjects was 16.85 years. Measured parameters were vital capacity (VC), forced vital capacity (FVC), forced expiratory volume in the first second (FEV1), maximum expiratory flow (PEF), forced expiratory flow at 50% FVC (MEF50), forced expiratory flow at 25% FVC (MEF25), height, and weight. No one of them was an active smoker. No statistically relevant differences ($p > 0,05$) in height and weight have been found in passive smokers athletes (PS) in respect to non passive smokers athletes (NS). Nevertheless, NS are higher and heavier than PS. The values of VC ($p < 0,05$), FEV1 ($p < 0,01$), MEF50 ($p < 0,01$) and MEF25 ($p < 0,05$), in NS athletes are on average higher in respect to PS athletes. Statistically relevantly lower results in ventilatory parameters in PS athletes in respect to NS athletes could be an indicator lesser functional abilities of the PS group in relation to those of the NS group. It could also be an indicator of passive smoking and early pulmonary dysfunction connection. It is significant observation that NS athletes are better in all measured ventilatory parameters than PS athletes.

Keywords: respiratory function, passive smoking, athletes

ANALIZA KVANTITATIVNIH PROMJENA U PROSTORU ISTRAŽIVANIH MOTORIČKIH SPOSOBNOSTI KOD MLADIH KOŠARKAŠICA

Mile Galić¹, Azer Korjenić^{1,2}, Ante Vučić³
Alem Kukić⁴

¹Univerzitet "Džemal Bijedić", Mostar, BiH

²Nastavnički fakultet Univerziteta "Džemal Bijedić",
Mostar, BiH

³Samostalni istraživač, Mostar, BiH

⁴JU OŠ Meša Selimović, Sarajevo, BiH

SAŽETAK

Istraživanje uticaja trenažnog programa rada na strukturu i relaciju latentnih antropoloških dimenzija, kao i napretka sveukupne situacione uspješnosti, odnosno učinkovitosti u košarci, mogao bi doprinijeti lakšem razumijevanju ukupne košarkaške igre mladih košarkašica. Nasuprot tomu dobro osmišljen i programiran trening može efikasno doprinijeti željnom pravcu rasta i razvoja mladih košarkašica. Osnovni cilj ovog istraživanja bio je da se utvrdi razina i veličina promjena motoričkih sposobnosti, mladih košarkašica uzrasta od 13 do 15 godina, pod utjecajem primjenjenog trenažnog programa rada u košarci.

Da bi se utvrdile globalne kvantitativne promjene unutar istraživanih antropoloških prostora, primjenjena je diskriminativna kanonička analiza u manifestnom prostoru

Ključne riječi: košarka, transformacije, trenažni program, antropološki status, motoričke sposobnosti.

ANALYSIS OF QUANTITATIVE CHANGES IN SCOPE OF THE RESEARCHED MOTOR SKILLS OF YOUNG BASKETBALL PLAYERS

Mile Galić¹, Azer Korjenić^{1,2}, Ante Vučić³
Alem Kukić⁴

¹University "Džemal Bijedić" in Mostar, Bosnia and Herzegovina

²Faculty of Teaching at the University "Džemal Bijedić" in Mostar, Bosnia and Herzegovina

³Independent researcher, Mostar, BiH

⁴JU OŠ Meša Selimović, Sarajevo, BiH

ABSTRACT

Research of the impact of the training program on the structure and relation of latent anthropological dimensions, as well as of the progress of the overall situational success, the efficiency of basketball, could contribute to an easier understanding of the overall basketball game of young female basketball players. In contrast to that, a well-designed and programmed training can be effective in contributing to the desirable direction of growth and development of young female basketball players. The main aim of this research was to determine the level and magnitude of changes in the motor skills of young female basketball players, who are 13 to 15 years of age, under the influence of the applied basketball training program.

In order to determine global quantitative changes within the researched anthropological scopes, a discriminative canonical analysis was applied in manifest scope.

Keywords: basketball, transformations, anthropological status, training program, motor skills.

HAGLUND'OV SINDROM KOD NOGOMETAŠA- FIZIOTERAPEUTSKI PRIKAZ SLUČAJA

Elvir Gosić¹, Sandro Ugrina², Iva Lončarić
Kelečić³

¹Dom zdravlja Primorsko-goranske županije, Hrvatska

²NK Opatija, Hrvatska

³HQM, PhD(c) Klinički bolnički centar Zagreb,
Hrvatska

SAŽETAK

Haglundov deformitet posljedično dovodi Haglundova sindroma, a koji je čest uzrok boli uopće. Za postavljanje glavne dijagnoze, osnova su adekvatan klinički pregled i dijagnostika, uključujući anamnestičku pozadinu pacijenta.

Sindromi prenaprezanja u području stopala vrlo su učestali kod sportaša, primarno zbog prekomjernog treniranja visokim intenzitetom. Od iznimne važnosti za pojedinca i sportsku participaciju, smanjiti njihovu učestalost, ali progresiju poremećaja adekvatnim liječenjem u ranoj fazi pojave.

Prikaz ovog slučaja ima za cilj pokazati interakcije intrinzičnih i ekstrinzičnih faktora u nastaku i progresiji Haglundovnog deformiteta, te ishoda i odabira liječenja u slučaju kada se problemu ne pristupi u ranijoj fazi, unatoč činjenici dostupnosti različitih konzervativnih metoda kojima se može usporiti progresija deformiteta i odgoditi, ako ne i spriječiti kirurško liječenje.

Ključne riječi: fizioterapija, prikaz slučaja, sindromi prenaprezanja, stopalo, sport

HAGLUND'S SYNDROME IN FOOTBALL PLAYERS - PHYSIOTHERAPEUTIC CASE REPORT

Elvir Gosić¹, Sandro Ugrina², Iva Lončarić
Kelečić³

¹Primorje-Gorski Kotar County Health Center, Croatia

²NK Opatija, Croatia

³Clinical Hospital Center Zagreb, Croatia

ABSTRACT

Haglund's deformity consequently leads to Haglund's syndrome, which is a common cause of pain in general. For the established main diagnoses, the basis is an adequate clinical examination and diagnostics, including the anamnestic background of the patient.

Overstrain syndromes in the foot area are common in athletes, primarily due to excessive high-intensity training. It is essential for the individual and sports participation to reduce their frequency, but also the progression of the disorder by adequate treatment in the early stages of its occurrence.

The presentation of this case aims to show the interactions of intrinsic and extrinsic factors in the onset and progression of Haglund's deformity, as well as the outcome and selection of treatment in the case when the problem is not approached at an earlier stage, despite the fact of the availability of various conservative methods that can slow down the progression of the deformity and delay it, but also prevent surgical treatment.

Key words: case report, foot, overstrain syndromes, physiotherapy, sport

MIŠIĆNO-KOŠTANE OZLJEDE KOD NOGOMETAŠA I RUKOMETAŠA U HRVATSKOJ-PILOT OPSERVACIJSKA STUDIJA

Elvir Gosić¹, Hrvoje Vlahović², Iva Lončarić Kelečić³

¹Univ.mag.physioth, Dom zdravlja Primorsko-goranske županije, Hrvatska

²Fakultet zdravstvenih studija, Sveučilište u Rijeci, Hrvatska

³Univ.mag.physioth, univ.spec.HQM, PhD(c) Klinički bolnički centar Zagreb, Hrvatska

SAŽETAK

Uvod: Nogomet i rukomet složeni su kontakti sportovi sa relativno visokim rizikom pojave mišićno-koštanih ozljeda kod sportaša. Oba sporta, okarakterizirana kretnjama visokog intenziteta, uz izuzetne motoričke sposobnosti zahtijevaju i adekvatne periode potrebne za oporavak. Poznavanjem obilježja mišićno-koštanih ozljeda kod sportaša moguće je kreirati temeljne strategije prevencije.

Cilj: Cilj ovog istraživanja bio je ispitati postoji li i kakva razlika u pojavnosti, odnosno učestalosti mišićno-koštanih ozljeda te ozljeda gornjeg i donjeg ekstremiteta, a obzirom na sport.

Ispitanici i metode: Presječnim istraživanjem, on line upitnikom je prikupljeno 166 odgovora. Ispitanici su bili nogometaši i rukometaši, muškog spola s područja Republike Hrvatske u dobi >18 godina, igraju u seniorskoj kategoriji u prve četiri lige nacionalnog saveza. Prikupljeni su sociodemografski i antropometrijski podatci, te generalne karakteristike sporta i mišićno-koštanih ozljeda. Podatci su obrađeni pomoću programa Statistica i inferencijalno analizirani Mann-Whitney testom i χ^2 test-om.

Rezultati: Nije pronađena razlika u generalnoj učestalosti mišićno-koštanih ozljeda između nogometaša i rukometaša ($p=0,065$). Ozljede donjih ekstremiteta učestalije su kod nogometaša nego rukometaša ($p=0,021$), dok su ozljede gornjih ekstremiteta učestalije kod rukometaša nego nogometaša ($p=0,044$).

Zaključak: Pilot opservacijskom studijom ustanovljeno je da ne postoji razlika u pojavnosti ozljeđivanja između nogometaša i rukometaša u Hrvatskoj, ali ozljede obzirom na lokalitet, specifične su i značajne su za pojedini sport. Već temeljnim poznavanjem generalnih karakteristika mišićno-koštanih ozljeda u sportu, moguće je realizirati preventivne programe u cilju smanjenja njihove učestalosti.

Ključne riječi: *nogomet, rukomet, sportaši, sportske ozljede*

MUSCULOSKELETAL INJURIES IN FOOTBALL AND HANDBALL PLAYERS IN CROATIA - A PILOT OBSERVATIONAL STUDY

Elvir Gosić¹, Hrvoje Vlahović², Iva Lončarić Kelečić³

¹Univ.mag.physioth, Primorje-Gorski Kotar County Health Center, Croatia

²Faculty of Health Studies, University of Rijeka, Croatia

³Univ.mag.physioth, univ.spec.HQM, PhD(c) Clinical Hospital Center Zagreb, Croatia

ABSTRACT

Introduction: Football and handball are complex contact sports with a relatively high risk of musculoskeletal injuries in athletes. Both sports are characterized by high-intensity movements, in addition to exceptional motor skills, they also require adequate periods for recovery. By knowing the basic musculoskeletal characteristics of athletes, it is possible to create prevention strategies.

Objective: The objective of this research was to examine whether there is any difference in the incidence, or frequency, of musculoskeletal injuries and upper and lower extremity injuries, with regard to sports.

Respondents and methods: Through cross-sectional research, 166 responses were collected using an online questionnaire. The respondents were football and handball players from Croatia, males aged >18 years, playing in the senior category in the first four leagues of the national association. Sociodemographic and anthropometric data, as well as general characteristics of sports and musculoskeletal injuries, were collected. The data were processed using the Statistica program and inferentially analyzed with the Mann-Whitney test and χ^2 test with a significance level of $p < 0.05$.

Results: No difference was found in the general frequency of musculoskeletal injuries between soccer players and handball players ($p=0.065$). Injuries of the lower extremities are more frequent among football players than handball players ($p=0.021$), while injuries of the upper extremities are more frequent among handball players than soccer players ($p=0.044$).

Conclusion: This pilot observational study revealed that there is no difference in the incidence of injuries between football players and handball players in Croatia, but injuries are specific and significant for each sport, depending on the location. With basic knowledge of the general characteristics of musculoskeletal injuries in sports, it is possible to implement preventive programs to reduce their occurrence and frequency.

Keywords: football, handball, athletes, sports injuries

POTICANJE DODATNE FIZIČKE AKTIVNOSTI NA OTVORENOM KOD DJECE PREDŠKOLSKOG UZRASTA

Zorica Stankovska¹, Ivan Malcev²

¹Univerzitet Sv. Kiril i Motodij Skopje, Pedagoški fakultet Sv. Kliment Ohridski, S.Makedonija

²Univerzitet Sv. Kiril i Motodij Skopje, Fakultet fizičkog obrazovanja, sporta i zdravlja, S. Makedonija

SAŽETAK:

Živimo u vremenu kada je tehnologija i upotreba ekrana sve zastupljenija, nije ni čudo što je fizička aktivnost djece općenito zanemarena. Umjesto da provode dragocjeno vrijeme igrajući igrice, mnoga djeca provode više od 6 sati dnevno ispred ekrana gledajući TV, igrajući virtualne igrice ili gledajući sadržaje na društvenim mrežama koji su često neprimjereno njihovoj dobi, ali i njihovom kognitivnom i psihosocijalnom razvoju. Pokazalo se da igra u prirodnom okruženju pozitivno utiče na motorički razvoj dece i nivo fizičke aktivnosti. Prethodno istraživanje je pokazalo da je samo 3 od 10 djece u 30 centara za brigu o djeci koje su proučavali učestvovalo u 60 minuta igre na otvorenom. Također su otkrili da se u mnogim centrima igra na otvorenom zapravo događa rjeđe nego što je planirano, te da oko trećine male djece nije igralo na otvorenom. U sjevernim geografskim širinama, značajan pad fizičke aktivnosti vezanih za brigu o djeci i vremena za igru na otvorenom predstavljaju sezonske promjene i predstavljaju još jedan zabrinjavajući trend. Temperatura, padavine i dnevni sati mogu biti prepreke fizičkoj aktivnosti i mogu objasniti sezonske varijacije u fizičkoj aktivnosti. Istraživanja pokazuju da je ukupni nivo aktivnosti među mladima često najviši u proljeće i ljeto. Provođenje vremena vani u prirodi kao rezultat kretanja više sati vani ima mnogo koristi za djecu. Što više vremena djeca provode u prirodi, to više cijene prirodu, razumiju ekološke sisteme i razvijaju želju da je zaštite. Poboľjšali su san, smanjili vrijeme provedeno pred ekranima, poboľjšali senzorne vještine, poboľjšali samopouzdanje, ukratko, dodatna fizička aktivnost napolju ima velike koristi za djecu zbog holističkog pristupa koji pokriva dječje fizičke, mentalne, emocionalne i socijalne blagostanje. Značaj ovog istraživanja je u kritičnom značaju dodatne fizičke aktivnosti na otvorenom u zdravom razvoju male djece. U ovoj studiji, općenito su postignute preporuke za fizičku aktivnost kroz igru i posebno igru na otvorenom, koja dolazi s mnogim drugim razvojnim prednostima uključujući socijalne vještine, emocionalno učenje, kognitivne vještine i emocionalno blagostanje.

Ključne riječi: djeca, fizička aktivnost, igra u prirodi

ENCOURAGING ADDITIONAL PHYSICAL ACTIVITY OUTDOORS IN PRESCHOOL-AGED CHILDREN

Zorica Stankovska¹, Ivan Malcev²

¹Ss. Cyril and Methodius University in Skopje, Faculty of Pedagogy "St. Kliment Ohridski" - Skopje, North Macedonia

²Ss. Cyril and Methodius University in Skopje, Faculty of Physical Education, Sport, and Health, North Macedonia

ABSTRACT:

We live in a time when technology and screen use are increasingly prevalent, so it's no wonder that physical activity in children is largely neglected. Instead of spending precious time playing games, many children spend over 6 hours a day in front of screens watching TV, playing video games, or engaging with social media content often unsuitable for their age and cognitive and psychosocial development... It has been shown that playing in a natural environment positively influences children's motor development and level of physical activity. Previous research has shown that only 3 out of 10 children in 30 childcare centers studied engaged in 60 minutes of outdoor play. They also found that in many centers, outdoor play actually occurs less frequently than planned, and about one-third of young children do not engage in outdoor play. In northern latitudes, a significant decline in childcare-related physical activity and outdoor playtime represents a seasonal trend. Temperature, precipitation, and time of day can be barriers to physical activity and may explain seasonal variations in physical activity. Research shows that overall levels of activity in youth are often highest in spring and summer. Spending time outdoors in nature as a result of more hours spent outdoors has many benefits for children. The more time children spend in nature, the more they appreciate nature, understand ecological systems, and develop a desire to protect it. It improves sleep, reduces screen time, improves sensory skills, enhances self-esteem, in short, additional physical activity outdoors has great benefits for children due to the holistic approach covering physical, mental, emotional, and social well-being of children. The importance of this research lies in the critical importance of additional outdoor physical activity in the healthy development of young children. In this study, recommendations for physical activity through play in general, and outdoor play in particular, come with many other developmental benefits, including social skills, emotional learning, cognitive skills, and emotional well-being.

Keywords: children, physical activity, outdoor play

COMPLICATION OF DISTANCES BY INTRODUCING SECTIONS WITH DIFFERENT ENVIRONMENTAL CONDITIONS FOR INCREASING THE ENTERTAINMENT OF MARATHON SWIMMING

Egor M. Shchelkanov¹, Edward A. Chibrikov¹, Sergei A. Yakushin¹, Vladimir M. Bobylev²

¹State University of Education, Russia

²Moscow Swimming Academy, Russia

ABSTRACT

The article provides a brief analysis of the features of open water swimming in various environmental conditions: water salinity, current intensity, temperature, and wave load. On the one hand, these conditions objectively “break” the swimming technique practiced for years in indoor pools; on the other hand, it is these complexities that returns swimming to its origins and brings intrigue and unpredictability. The purpose of the presented work is to identify the degree of influence of the factors listed on the technique of open water swimming. Methods: analysis of data presented in the scientific literature or specialized websites on the Internet; formulated working hypotheses were tested using experimental swims at distances over 3 km during sports camps in fresh and salty waters. Salinity, current intensity, temperature, wave load creates ever-acting and ever-changing complexities, which give advantages to athletes with different morphological features and functional training as well as the level of readiness for dynamic adaptations. Some of the most universal techniques for overcoming emerging technical ambiguities that swimmers do not encounter in indoor pools, but constantly struggle in open water are described. The paper concludes that the entertainment of marathon swimming can be increased by the purposeful introduction of several segments with different conditions into the distance.

Keywords: *open water swimming; water salinity; current intensity; temperature; wave load; entertainment.*

THE LONG-TERM IMPACT ON ANKLE-BRACHIAL INDEX FROM LOW INTENSITY RESISTANCE EXERCISE WITH BLOOD FLOW RESTRICTION TECHNIQUE: A SYSTEMATIC REVIEW

Ratanyoo Longrak

Faculty of Sport Science, Burapha University, Chon Buri, Thailand

ABSTRACT

Context and Objective: This comprehensive review delves into the impact of low-intensity resistance training coupled with blood flow restriction (BFR) on arterial stiffness, evaluated through the ankle-brachial index (ABI). This assessment seeks to discern any discernible alterations in arterial stiffness attributed to this unique training approach. **Data Sources and Study Selection:** Employing systematic search via PubMed and Google Scholar databases, this review examined research articles focusing on the chronic effects of resistance training with BFR on the ABI. Inclusion criteria encompassed studies assessing this effect across various age groups while concentrating on healthy individuals and publications in the English language. Among the extensive array of studies, a selective inclusion of 5 research articles formed the foundational basis of this analysis. **Findings:** Synthesizing analyses from these studies illuminated the safety of BFR training, particularly at intensities around 20-30% or using elastic bands. Intriguingly, these modalities exhibited no significant impact on alterations in the ABI, notably observed within elderly subjects. However, a notable scarcity in studies focusing on young subjects warrants a more comprehensive investigation into this specific demographic. **Conclusion:** The findings of this review underscore the safety and efficacy of BFR resistance training methodologies, especially protocols utilizing 20-30% 1RM or incorporating elastic bands of 75- repetition-scheme, showcasing no significant impact on the ankle-brachial index, particularly in the elderly population over intervention periods not exceeding 12 weeks. Encouraging practitioners, these established methodologies offers safe practices for the elderly. However, the evident research gap in young subjects necessitates more expansive investigations.

Keywords: Ankle-brachial index, Blood flow restriction, Resistance training

RAPID WEIGHT LOSS PRACTICES IN ELITE YOUTH WRESTLERS; THE SOURCES OF INFLUENCE AND METHODS USED

Krešo Škugor¹, Ante Škugor¹, Barbara Gilić^{1,2}

¹Faculty of Kinesiology, University of Split, Split, Croatia,

²High Performance Sport Center, Croatian Olympic Committee, Zagreb, Croatia

ABSTRACT

Rapid weight loss (RWL) in youth wrestlers is a concerning practice that can have significant negative effects on the health and well-being of young athletes. This research aimed to identify RWL strategies used by young wrestlers and to compare RWL history between successful and less successful wrestlers. This study included 53 elite youth wrestlers aged 16-19 years, all competing at the National championships. Variables included anthropometric characteristics (body mass, body height, body fat percentage), demographic information, and RWL variables. Descriptive statistics included means, standard deviations, and percentages. Differences between medal-winners and non-medal winners in the RWL history variables were computed using the t-test for independent variables. Wrestlers reported that they started cutting weight at around 13 years of age. The wrestling coach was reported to be the most influential for RWL application, with 74% of the participants reporting that the coach was very influential. Wrestlers reported that they most frequently used training in a heated room (52%) as the RWL method, which was followed by increased exercise (38%), restricted fluid ingestion (34%), and a sauna (32%). Promoting a culture of proper nutrition, hydration, and safe weight management practices within the sport can help prevent the normalization of unhealthy behaviors and reduce the prevalence of rapid weight loss practices among youth wrestlers.

Keywords: combat sports, young athletes, well-being, body composition

NEW METHODS IN SPORTS PSYCHOLOGY TRAINING: MENTAL MOMENTUM METHOD IN ROWING – A CASE STUDY

Marijana Mladenović

College of Sports and Health, Belgrade, Serbia

ABSTRACT

The need to address the contemporary generation of athletes' approach to online and offline reality has brought the idea of creating a sport psychology training program in the form of a web application but with experience of real-time one-on-one psychology guidance in mental training. This case study aimed to apply and test one such psychology program in rowing. One athlete, age 22, male, with experience on collegiate, national, and international levels of competition voluntarily participated in this case study. Current and long-term commitment to sport psychology training and perceptions of locus of control and potential influence on momentum in competitive situations were self-graded before and after participation in the study. Self-assessment on all four psychological variables improved after completing a four-week sport psychology training program in the format of a web application. Additional information provided by the subject in the study revealed user-friendliness, timetable flexibility to enter sport psychology training during 24 hours, as well as daily engagements in guided sports psychology training, as important landmarks of such sport psychology training program. As an effect of the program's content, the subject emphasized the perception of self-confidence and mental toughness improvement and enlargement. Further research of the content and the format of the sport psychology training program used in this case study is required in terms of a larger sample and control of different variables affected by the program's content.

Key words: psychological training, mental momentum, locus of control, rowing

THE EFFECTS OF QI GONG AND MOTOR IMAGERY TRAINING ON FIBROMYALGIA

Roberto Fagnani

Telematic University of Pegaso, Naples, Italy

ABSTRACT

Purpose: The condition known as Fibromyalgia (FM), or Fibromyalgia Syndrome, is a chronic rheumatic disorder characterized by widespread musculoskeletal pain. The purpose of this pilot study is to show how Qi Gong and Motor Imagery Training techniques can improve the general function, psychophysical state and symptoms of FM patients.

Method: 4 subjects (women of different ages, social backgrounds, experiences and symptom manifestations) participated in a total of 22 online classes lasting one hour each, spread over a period of 7 months (July 2023-January 2024). The exercises assigned are Ba Duan Jin Qi Gong, Zhan Zhuang, a sequence of joint gymnastics and other slow movements to coordinate body and breath. Specific breathing techniques and guided visualization-meditation were also shown.

Progress was assessed through two questionnaires: the RFIQ (Revised Fibromyalgia Impact Questionnaire) and a monthly self-assessment form containing 22 questions on symptoms and other factors, to be answered on a scale of 1 to 10 or percentage.

Results: From the analysis of the RFIQs, two practitioners showed improvements of 48.5% and 31.87%, while the other two, who were less consistent in their practice and had less data available, showed one an improvement of 13% and the other a worsening of 13.9%. The 22 questions provided promising results, especially on dizziness, anxiety and depression (for one subject as much as 100%).

Conclusion: Qi Gong exercises, combined with light exercise, breathing and motor imagery training techniques, and specific mental visualizations, have the potential to significantly improve the FM condition, but the exercises have to be practiced methodically and consistently. Psychological work is also needed to uncover and manage the emotions at the origin of the traumas that, according to recent studies, cause the onset of the condition.

Keywords: Fibromyalgia, Qi Gong, health, sports science, training.

EFFECT OF CROSS TRAINING ON PHYSICAL FITNESS AND BODY COMPOSITION AMONG RECREATIONAL ATHLETES MEASURED WITH BIO IMPEDANCE AND MODERN HEART RATE MONITORING SYSTEM

Iskra Bojadjieva Kitancheva, Zarko Kostovski

Faculty for physical education, sport, and health, University “St. Cyril and Methodius – Skopje, Macedonia

ABSTRACT

A range of studies demonstrate the positive effects of being physically active. Regular physical exercise and balanced diet is paramount for maintaining healthy body weight. Cross-training is one of the most used methods among recreational athletes. Six weeks of cross training program implemented on recreational athletes with average age 38 resulted with no significant effect on their body composition or their physical fitness. It remains to be explored the effects of cross-training on the same recreational athletes over a longer period.

Keywords: cardiorespiratory performance, fitness test, exercise, myzone.

RAZLIKE U ZASTUPLJENOSTI POSTURALNIH POREMEĆAJA KIČMENOG STUBA KOD UČENIKA NIŽIH RAZREDA OSNOVNE ŠKOLE

Senad Bajrić¹, Aida Bačić Bajrić², Osmo Bajrić¹, Gordan Bajić³

¹Panevropski Univerzitet Apeiron, Fakultet sportskih nauka, Banja Luka, BiH

²JU Dom zdravlja, Travnik, BiH

³Panevropski Univerzitet Apeiron, Fakultet zdravstvenih nauka, Banja Luka, BiH

SAŽETAK

Istraživanje je provedeno na uzorku od 146 ispitanika – učenika nižih razreda osnovne škole, uzrasne dobi 7 – 11 godina iz tri osnovne škole grada Banja Luka. Ukupan uzorak ispitanika podijeljen je na pet subuzoraka u odnosu na hronološku dob.

Osnovni cilj istraživanja bio je da se transversalnim presjekom utvrdi frekvencija i struktura posturalnih poremećaja kičmenog stuba kod ispitivanog uzorka ispitanika kao i razlike u zastupljenosti posturalnih poremećaja kod različitih subuzoraka ispitanika. Za procjenu zastupljenosti i razlika posturalnih poremećaja kičmenog stuba analizirani su poremećaji u sagitalnoj ravni (kifoza i lordoza), te poremećaj u frontalnoj ravni (skolioza).

Primjenom kontigencijskih tablica prikazane su frekvencije i pripadajući postotci posturalnih poremećaja kičmenog stuba. Primjenom Hi-kvadrat testa utvrđene su razlike i statistička značajnost razlika posturalnih poremećaja kičmenog stuba između ispitivanih subuzoraka.

Stepen posturalnih poremećaja kičmenog stuba utvrđivan Kontigencijskim tablicama – izračunavanjem frekvencije (F) i postotka (%) ukazuje na statistički značajan postotak zastupljenosti poremećaja kičmenog stuba (kifoza 21,2%, skolioza 19,9%, lordoza 19,2%) i to uglavnom u prvom stepenu deformacija (manje odstupanje od normalnog statusa), što omogućava korekciju stanja uz primjenu adekvatnih korektivnih vježbi u radu sa učenicima ovog uzrasta.

Takođe, rezultati Hi-kvadrat testa ukazuju da između ispitivanih subuzoraka ispitanika postoji statistički značajna razlika u zastupljenosti posturalnih poremećaja KIFOZE (0.005) i SKOLIOZE (0.000) dok kod zastupljenosti LORDOZE nije utvrđena statistički značajna razlika između subuzoraka.

Ključne riječi: *kičmeni stub, posturalni poremećaji, razlike, učenici*

DIFFERENCES IN THE REPRESENTATION OF POSTURAL DISORDERS OF THE SPINAL COLUMN IN PRIMARY SCHOOL STUDENTS

Senad Bajrić¹, Aida Bačić Bajrić², Osmo Bajrić¹, Gordan Bajić³

¹*Pan-European Apeiron University, Faculty of Sports Sciences, Banja Luka, BiH*

²*JU Dom zdravlja, Travnik, Bosnia and Herzegovina*

³*Pan-European Apeiron University, Faculty of Health Sciences, Banja Luka, BiH*

ABSTRACT

The research was conducted on a sample of 146 respondents - students of lower grades of elementary school, aged 7-11 years from three elementary schools in the city of Banja Luka. The total sample of respondents was divided into five subsamples in relation to chronological age.

The main goal of the research was to determine the frequency and structure of postural disorders of the spinal column in the examined sample of subjects, as well as the differences in the representation of postural disorders in different subsamples of subjects. To assess the prevalence and differences of postural disorders of the spinal column, disorders in the sagittal plane (kyphosis and lordosis) and disorders in the frontal plane (scoliosis) were analyzed.

Using contingency tables, the frequencies and corresponding percentages of postural disorders of the spinal column are shown. Using the Chi-square test, the differences and statistical significance of the differences in postural disorders of the spinal column between the examined subsamples were determined.

The degree of postural disorders of the spinal column determined by contingency tables - by calculating the frequency (F) and percentage (%) indicates a statistically significant percentage of spinal disorders (kyphosis 21.2%, scoliosis 19.9%, lordosis 19.2%), mostly in the first degree of deformation (minor deviation from the normal status), which enables the correction of the condition with the application of adequate corrective exercises in working with students of this age.

Also, the results of the Chi-square test indicate that there is a statistically significant difference in the prevalence of postural disorders KYPHOSIS (0.005) and SCOLIOSIS (0.000) between the examined subsamples of respondents, while no statistically significant difference was found between the subsamples in the prevalence of LORDOSIS.

Key words: spinal column, postural disorders, differences, students

PERCEPCIJA TUMAČENJA RANOG PREPOZNAVANJA I PODRŠKE SPORTSKI NADARENIH UČENIKA

Osmo Bajrić, Velibor Srdić, Senad Bajrić,
Adem Preljević

*Pan-evropski univerzitet "Apeiron", Fakultet sportskih nauka,
Banja Luka, Bosna i Hercegovina, Državni Univerzitet u
Novom Pazaru, Srbija*

SAŽETAK

Istraživanje je provedeno na uzorku od 102 ispitanika (nastavnika/profesora) zaposlenih u osnovnim školama Zeničko-dobojskog kantona Federacije Bosne i Hercegovine.

Osnovni cilj istraživanja je utvrđivanje stavova i eventualnih razlika u stavovima nastavnika/profesora o ranom prepoznavanju i razvoju sportski nadarenih učenika koji prelaze iz razredne u predmetnu nastavu, u aktivnostima kojima se učenik bavi s obzirom na spol, radni status, starosnu dob i stepen obrazovanja ispitanika.

Kao mjerni instrumenat u istraživanju primijenjen je anketni upitnik petostepene Likertove skale u kojem svaka tvrdnja ima 5 odgovora (uopšte se ne slažem, ne slažem se, nemam mišljenje/neutralan sam, slažem se, potpuno se slažem). Anketni upitnik je sadržavao sedam indikatora za procjenu prepoznavanja i razvoja sportski nadarenih učenika, kao i pitanja koja se odnose na spol, radno mjesto/poziciju, starosnu dob i stepen obrazovanja ispitanika.

Za utvrđivanje eventualnih statistički značajnih razlika između grupa ispitanika s obzirom na spol, radno mjesto/poziciju, starosnu dob i stepen obrazovanja ispitanika primijenjeni su rezultati t-testa i analiza varijanse različitih grupa sa LSD Post Hoc testovima poređenja.

Dobijeni rezultati ukazuju da nema statistički značajnih razlika u stavovima nastavnika/profesora o ranom prepoznavanju i razvoju sportski nadarenih učenika u aktivnostima kojima se učenik bavi s obzirom na spol i starosnu dob, a razlike u stavovima ispitanika su utvrđene s obzirom na radni status i stepen obrazovanja ispitanika.

Ključne riječi: *ispitanici, percepcija, podrška, rano prepoznavanje, razvoj, sportska nadarenost*

PERCEPTION OF THE INTERPRETATION OF EARLY RECOGNITION AND SUPPORT OF SPORTS GIFTED STUDENTS

Osmo Bajrić, Velibor Srdić, Senad Bajrić,
Adem Preljević

*Pan-European University "Apeiron", Faculty of Sports Sciences,
Banja Luka, Bosnia and Herzegovina, State University in Novi
Pazar, Serbia*

ABSTRACT

The research was conducted on a sample of 102 respondents (teachers/professors) employed in elementary schools in the Zenica-Doboj Canton of the Federation of Bosnia and Herzegovina.

The main goal of the research is to determine the attitudes and possible differences in the attitudes of teachers/professors regarding the early recognition and development of athletically gifted students who move from classroom to subject classes, in the activities that the student engages in regard to the gender, work status, age and level of education of the respondents.

As a measuring instrument in the research, a five-point Likert scale questionnaire was used, in which each statement has 5 answers (I do not agree at all, I do not agree, I have no opinion/I am neutral, I agree, I completely agree). The survey questionnaire contained seven indicators for assessing the recognition and development of athletically gifted students, as well as questions related to the respondent's gender, workplace/position, age and level of education.

To determine possible statistically significant differences between the groups of respondents with regard to gender, workplace/position, age and level of education of the respondents, the results of the t-test and analysis of variance of different groups with LSD Post Hoc comparison tests were applied.

The obtained results indicate that there are no statistically significant differences in the attitudes of teachers/professors regarding the early recognition and development of athletically gifted students in the activities that the student engages in regard to gender and age, and the differences in the attitudes of the respondents were determined with regard to work status and level of education of the respondents.

Key words: respondents, perception, support, early recognition, development, sports talent

"WONDER M.ARTS," DEVELOPMENT OF WOMEN'S EMPOWERMENT THROUGH MARTIAL ARTS

Giuseppe Giardullo

Department of Human, Philosophical and Educational Sciences, University of Salerno, Street Giovanni Paolo II, Fisciano (Salerno), Italy

ABSTRACT

Background: There is little use of activities such as martial arts aimed at developing awareness and empowerment in female subjects. **Purpose:** The purpose is to develop and implement a training protocol that can foster the implementation of empowerment in women through Karate and Judo. **Methods:** The sample consists of 70 women ranging in age from 21 to 60 years, with different backgrounds, specifically the countries of origin are Italy, Ukraine, Slovenia, Romania and Turkey. The method adopted involves the development of specific training protocols, focused on the implementation of motor skills useful for increasing empowerment, through Karate and Judo. A questionnaire was developed, which is divided into two sections: the first useful for sample identification, the second with questions useful for getting an account of the data with respect to awareness of empowerment development. **Results:** In the post-implementation results of the protocol, it is found that 69.9% feel comfortable being in a group; moreover, 68.5% describe themselves as 'aware'. 81.5% of the sample surveyed developed sufficient confidence in defending themselves verbally, while 59.9% in defending themselves physically. Chi-square test analysis showed a first significant relationship between the emotional state of the women surveyed and awareness with respect to their skills and strengths ($p=0.004$) and a second in being able to physically defend themselves ($p=0.007$). **Conclusion:** This study provides a solid basis for the use of martial arts, particularly Karate and Judo, as effective tools to promote empowerment in women by encouraging greater self-confidence, personal awareness, and physical safety.

KeyWords: Empowerment; Martial Arts; Questionnaire.

SPORT U FUNKCIJI DJECE I MLADIH

Virna Čehić, Anita Zovko

*Filozofski fakultet u Rijeci, Odsjek za pedagogiju
Sveučilišna avenija 4, 51000 Rijeka, Republika
Hrvatska*

SAŽETAK

Sport je važan aspekt djetinjstva i adolescencije koji pruža brojne koristi za fizičko i mentalno zdravlje, socijalne vještine i formiranje vrijednosti. U povijesti, sport je imao značajnu ulogu u društvu, promovirajući zdrav način života i potičući razvoj individualnih sposobnosti i timskog duha. Utjecaj sporta na djecu i mlade je iznimno važan, fizička aktivnost koju sport pruža pomaže u održavanju optimalne tjelesne kondicije, jačanju mišića i kostiju, te smanjenju rizika od bolesti. Sport ima i pozitivan utjecaj na mentalno zdravlje, smanjujući stres, potičući osjećaj samopouzdanja i razvijajući vještine upravljanja emocijama. Socijalne vještine i vrijednosti se također oblikuju kroz sportske aktivnosti, a sudjelovanje u ekipnim sportovima omogućava djeci da nauče surađivati, komunicirati, razvijati timski duh i poštivati pravila igre i svog protivnika. Osim toga, sport ima i odgojno-obrazovni aspekt. Treneri, nastavnici i roditelji imaju ključnu ulogu u odgoju i obrazovanju djece kroz sportske aktivnosti.

Ključneriječi: Sport, djeca, mladi, utjecaj, zdravlje

SPORTS IN THE FUNCTION OF CHILDREN AND YOUNG PEOPLE

Virna Čehić, Anita Zovko

*Faculty of Philosophy in Rijeka, Department of Pedagogy
University Avenue 4, 51000 Rijeka, Republic of Croatia*

SUMMARY

Sport is an important aspect of childhood and adolescence that provides numerous benefits for physical and mental health, social skills and value formation. Historically, sport has played a significant role in society, promoting a healthy lifestyle and encouraging the development of individual abilities and team spirit. The influence of sports on children and young people is extremely important, the physical activity provided by sports helps to maintain optimal physical condition, strengthen muscles and bones, and reduce the risk of disease. Sport also has a positive impact on mental health, reducing stress, promoting self-confidence and developing emotion management skills. Social skills and values are also shaped through sports activities, and participation in team sports allows children to learn to cooperate, communicate, develop team spirit and respect the rules of the game and their opponent. In addition, sport has an educational aspect. Coaches, teachers and parents have a key role in the upbringing and education of children through sports activities.

Keywords: Sport, children, youth, impact, health

RELATION OF BLOOD PARAMETERS AND NIRS-DERIVED HEMOGLOBIN; PRELIMINARY STUDY IN YOUTH SPORT CLIMBERS

Dario Vrdoljak

Faculty of Kinesiology, University of Split, 21 000 Split, Croatia

ABSTRACT

Sport climbing is a sport that requires repeated isometric strength of the finger flexors. Blood flow in muscles results in a greater increase during slow-velocity contractions. Therefore, this study aimed to determine the association between hemoglobin in blood and NIRS-derived total hemoglobin (tHb) levels. The sample of participants included 12 (6 females, 6 males) recreational and low-level competitive youth climbers aged 15.33 ± 1.30 years, all members of one sport climbing club. Their mean training experience was 7.50 ± 2.75 years, and the mean training volume was 5.2 ± 1.5 hours a week. The sample of variables included anthropometric indices (body height, body mass, and body fat percentage), blood parameters (hemoglobin and hematocrit), and NIRS-derived blood hemoglobin (tHb). The results of this study showed no significant correlations between blood parameters and tHb. Precisely, hemoglobin and hematocrit levels had no correlations with pre-test tHb (-0.05), post-test tHb (0.03), and tHb rate (-0.02). This data showed that hemoglobin and hematocrit levels, as whole-body blood parameters, are not connected to local muscle hemodynamic.

Keywords: hemodynamic, NIRS, sport climbing, sustained contraction

ANALIZA STRUKTURE SOMATSKIH ODLIKA KOŠARKAŠA KADETSKOG UZRASTA

Alem Kukić¹, Munir Talović², Mile Galić³

¹JUOŠ "Meša Selimović", Sarajevo, Bosna i Hercegovina alem.kukic76@gmail.com

²Fakultet sporta i tjelesnog idgoja Univerziteta u Sarajevu, Bosna i Hercegovina

³Student III ciklusa studija iz oblasti Kineziologije na Univerzitetu "Džemal Bijedić", Mostar, Bosna i Hercegovina

SAŽETAK

Istraživanje je provedeno na uzorku od 132 ispitanika – košarkaša kadeta iz 12 klubova učesnika kadetske košarkaške lige Kantona Sarajevo/Federacija BiH.

Osnovni cilj istraživanja je da se transverazlanim presjekom utvrdi struktura somatskih odlika (dimenzionalnosti i kompozicije tijela) mladih košarkaša. Uzorak varijabli za potrebe ovog istraživanja činio je skup od 14 mjernih instrumenata kojima su se procjenjivale mjere somatskih odlika mladih košarkaša.

U cilju utvrđivanja strukture somatskih odlika primijenjena je faktoraska analiza model glavnih komponenti i solucijom Varimax rotacije sa Keiser normalizacijom. Faktorabilnost matrice provjerena je Keiser - Meyer- Olkin testom adekvatnosti i Bartletovim testom sfericiteta.

Faktorskom analizom skupa varijabli dimenzionalnosti i kompozicije tijela košarkaša kadeta metodom ekstrakcije glavnih komponenata i njihovom rotacijom primjenom Varimax solucije izdvojena su dvije latentne dimenzije (faktora).

Prva latentna dimenzija može se definisati kao *faktor longitudinalne dimenzionalnosti i relativne mišićne mase*, a druga kao *faktor masne mase tijela*.

Dobiveni rezultati mogu biti od koristi trenerima za kvalitetnije programiranje trenažnog procesa u radu sa mladim košarkašima kao i dobra osnova naučnim radnicima za buduća istraživanja na populacijama mladih košarkaša.

Ključne riječi: *faktorska analiza, kadeti, košarka, somatske odlike, struktura*

ANALYSIS OF THE STRUCTURE OF SOMATIC CHARACTERISTICS OF BASKETBALL PLAYERS OF CADET AGE

Alem Kukić¹, Munir Talović², Mile Galić³

¹Public Institution Elementary School, "Meša Selimović", Sarajevo, Bosnia and Herzegovina

²Faculty of Sport and Physical Education of the University of Sarajevo, Bosnia and Herzegovina

³Student of the third cycle of studies in the field of Kinesiology at the University "Džemal Bijedić", Mostar, Bosnia and Herzegovina

SUMMARY

The study included 132 respondents - cadet basketball players from 12 teams participating in the cadet basketball league of Sarajevo, Canton, Federation of Bosnia and Herzegovina.

The primary objective of the research is to analyze the somatic characteristics (dimensionality and body composition) of young basketball players using a cross-sectional approach. The study used an assortment of 14 pieces of measuring equipment to evaluate the physical attributes of young basketball players.

To look at the structure of somatic features, a factor analysis with a principal components model and Varimax rotation with Keiser normalization was used. The matrix's factorability was assessed using the Keiser-Meyer-Olkin adequacy test and Bartlett's sphericity test. By factor analysis of the set of variables of dimensionality and body composition of cadet basketball players using the method of extraction of the main components and their rotation using the Varimax solution, two latent dimensions (factors) were extracted.

The first latent dimension is defined by longitudinal dimensionality and relative muscle mass, while the second is defined by body fat mass.

The findings may assist coaches in optimizing training programs for young basketball players and provide a foundation for future scientific research studying this demographic.

Key words: factor analysis, cadets, basketball, somatic characteristics, structure

FAKTORSKA STRUKTURA MOTORIČKOG PROSTORA KOŠARKAŠA UZRASTA 12 – 14 GODINA

Alem Kukić¹, Munir Talović², Aleksa Stanković³

¹ JUOŠ "Meša Selimović", Sarajevo, Bosna i Hercegovina

² Fakultet sporta i tjelesnog odgoja Univerziteta u Sarajevu, Bosna i Hercegovina

³ Ekonomski fakultet Univerziteta u Zenici, Bosna i Hercegovina

SAŽETAK

Istraživanje je provedeno na uzorku od 132 ispitanika – košarkaša uzrasta 12 – 14 godina iz 12 klubova učesnika kadetske košarkaške lige Kantona Sarajevo/Federacija BiH.

Osnovni cilj istraživanja bio je da se transverzalnim presjekom utvrdi struktura motoričkih sposobnosti košarkaša uzrasta 12 – 14 godina. Uzorak varijabli za potrebe ovog istraživanja činio je skup od 12 varijabli za procjenu motoričkih sposobnosti za koje se smatra da relativno dobro pokrivaju motorički prostor mladih košarkaša.

U cilju utvrđivanja strukture motoričkih sposobnosti primijenjena je faktorska analiza model glavnih komponenti i solucijom Varimax rotacije sa Keiser normalizacijom. Faktorabilnost matrice provjerena je Keiser - Meyer - Olkin testom adekvatnosti i Bartletovim testom sfericiteta.

Faktorskom analizom skupa varijabli za procjenu motoričkih sposobnosti mladih košarkaša, metodom ekstrakcije glavnih komponenta i njihovom rotacijom primjenom Varimax solucije izolovane su tri latentne dimenzije (faktora). Prvi faktor se može definisati kao *faktor odrazne moći i agilnosti*, a drugi kao *faktor lokomotorne brzine trčanja*. Treći faktor je *singl faktor*.

Dobiveni rezultati mogu biti od koristi trenerima za kvalitetnije programiranje trenažnog procesa u radu sa mladim košarkašima kao i dobra osnova naučnim radnicima za buduća istraživanja na populacijama mladih košarkaša. Također, rezultati istraživanja mogu poslužiti kao osnov za modeliranje programa za prepoznavanje talenata u košarkaškom sportu.

Ključne riječi: *faktorska analiza, košarka, latentne dimenzije, motoričke sposobnosti, struktura*

FACTOR STRUCTURE ANALYSIS OF THE MOTOR CAPACITIES OF BASKETBALL PLAYERS AGES 12–14

Alem Kukić¹, Munir Talović², Aleksa Stanković³

¹Public Institution Elementary School, “Meša Selimović”, Sarajevo, Bosnia and Herzegovina

²Faculty of Sport and Physical Education of the University of Sarajevo, Bosnia and Herzegovina

³Faculty of Economics, University of Zenica, Bosnia and Herzegovina

SUMMARY

The research study involved 132 respondents, specifically basketball players aged 12–14 from 12 teams in the cadet basketball league of Sarajevo Canton, Federation of Bosnia and Herzegovina. The primary objective of the research was to analyze the motor skills structure of basketball players aged 12–14 using a cross-sectional approach.

The study used a sample of 12 variables to evaluate the motor abilities of young basketball players, which were believed to comprehensively depict motor skills of young basketball players. To determine the structure of motor abilities, a factor analysis model of the main components and a solution of Varimax rotation with Keizer normalization were used. The matrix's factorability was assessed using the Keiser-Meyer-Olkin adequacy test and Bartlett's sphericity test.

Three latent dimensions (factors) were isolated by factor analysis of a set of variables for assessing the motor skills of young basketball players, using the method of extracting the main components and rotating them using the Varimax solution. The first factor may be described as the factor of reflective power and agility. The second is a determinant of running speed. The third factor is a singular factor. The findings may assist coaches in optimizing training programs for young basketball players and serve as a foundation for future studies on this demographic. The study findings may be used as a foundation for developing programs to identify potential in basketball players.

Key words: factor analysis, basketball, latent dimensions, motor skills, structure

RAZLIKE U STAVOVIMA NASTAVNIKA O RAZVOJNO PRIMJERENIM STRATEGIJAMA PODRŽAVANJA NADARENIH UČENIKA U SPORTU

Osmo Bajrić, Senad Bajrić, Velibor Srdić

Panevropski univerzitet "Apeiron", Banja Luka, BiH

SAŽETAK

Istraživanje je provedeno na uzorku od 102 ispitanika (nastavnika/profesora) zaposlenih u osnovnim školama Zeničko-dobojskog kantona Federacije Bosne i Hercegovine.

Osnovni cilj istraživanja je utvrđivanje stavova-mišljenja i eventualnih razlika nastavnika/profesora o ranom prepoznavanju i razvoju sportski nadarenih učenika koji prelaze iz razredne u predmetnu nastavu, u aktivnostima kojima se učenik bavi s obzirom na spol, radni status, starosnu dob i stepen obrazovanja ispitanika.

Kao mjerni instrumenat u istraživanju je primijenjen anketni upitnik petostepene Likertove skale u kojem svaka tvrdnja ima 5 odgovora (uopšte se ne slažem, ne slažem se, nemam mišljenje/neutralan sam, slažem se, potpuno se slažem). Anketni upitnik je sadržavao 4 indikatora za procjenu stavova nastavnika/profesora o razvojno primjerenim strategijama i podržavanju sportski nadarenih učenika, kao i pitanja koja se odnose na spol, radno mjesto/poziciju, starosnu dob i stepen obrazovanja ispitanika.

Za utvrđivanje statistički značajnih razlika između grupa ispitanika primijenjeni su rezultati t-testa i analiza varijanse različitih grupa sa LSD Post Hoc testovima poređenja.

Dobijeni rezultati ukazuju da nema statistički značajnih razlika u stavovima nastavnika/profesora o ranom prepoznavanju i razvoju sportski nadarenih učenika u aktivnostima kojima se učenik bavi s obzirom na starosnu dob i stepen obrazovanja ispitanika a značajne razlike utvrđene su u stavovima s obzirom na spol i radni status ispitanika.

Ključne riječi: stavovi, ispitanici, razlike, razvojno primjerena strategija, sportska nadarenost, T test, učenici

DIFFERENCES IN TEACHERS' ATTITUDES ON DEVELOPMENTALLY APPROPRIATE STRATEGIES FOR SUPPORTING GIFTED STUDENTS IN SPORTS

Osmo Bajrić, Senad Bajrić, Velibor Srdić

Pan-European University "Apeiron", Banja Luka, BiH

ABSTRACT

The research was conducted on a sample of 102 respondents (teachers/professors) employed in elementary schools in the Zenica-Doboj Canton of the Federation of Bosnia and Herzegovina.

The main goal of the research is to determine the attitudes-opinions and possible differences of teachers/professors regarding the early recognition and development of sports-gifted students who transition from classroom to subject classes, in the activities that the student engages in regard to the gender, work status, age and level of education of the respondents. .

A five-point Likert scale questionnaire was used as a measuring instrument in the research, in which each statement has 5 answers (I do not agree at all, I do not agree, I have no opinion/I am neutral, I agree, I completely agree). The survey questionnaire contained 4 indicators for assessing teachers'/professors' attitudes about developmentally appropriate strategies and supporting sports-gifted students, as well as questions related to the respondent's gender, workplace/position, age and level of education. To determine statistically significant differences between groups of respondents, the results of the t-test and analysis of variance of different groups with LSD Post Hoc comparison tests were applied. The obtained results indicate that there are no statistically significant differences in the attitudes of teachers/professors regarding the early recognition and development of athletically gifted students in the activities that the student engages with regard to the age and level of education of the respondents, and significant differences were found in the attitudes with regard to gender and work status of the respondents.

Key words: attitudes, respondents, differences, developmentally appropriate strategy, sports talent, T test, students

KOMPARATIVNA ANALIZA PRIMARNIH MOTORIČKIH SPOSOBNOSTI MLAĐEG ŠKOLSKOG UZRAST

Mara Banjac¹, Mihajlo Mijanović²

¹OŠ "Đura Jakšić" Banja Luka, BiH

²Fakultet za fizičko vaspitanje i sport, Banja Luka, BiH

SAŽETAK

U radu su istraživane motoričke sposobnosti učenika mlađeg školskog uzrasta, kako na početku tako i na kraju školske godine. Cilj istraživanja je bio da se utvrdi da li postoji statistički značajna razlika između prvog i drugog mjerenja u motoričkim sposobnostima. Prvo mjerenje je bilo na početku, a drugo na kraju školske godine.

Istraživanje je sprovedeno na uzorku od 97 učenika (45 učenika i 52 učenice). Uzorkom su bili obuhvaćeni učenici mlađeg školskog uzrasta (10 i 11 godina). Svi oni učestvuju aktivno u nastavnom procesu i imaju nastavu dva puta sedmično.

Uzorak varijabli je sačinjavao je set od sedam varijabli iz prostora motorike. Iz prostora motorike test opšte ravnoteže - flamingo, za brzinu alternativnih pokreta - taping rukom, za gipkost u zglobu kuka - pretklon u sijedu, za eksplozivnu snagu mišića nogu - skok u dalj iz mjesta za repetativnu snagu mišića trbuha i mišića pregibača u zglobu kuka - ležanje - sijed, za statičku silu mišića ruku i ramenog pojasa - izdržaj u zgibu i za agilnost - čunasto trčanje 10x5.

Posmatrajući pojedinačno istraživanje je pokazalo da je došlo do napretka u svim motoričkim sposobnostima izuzev testa ravnoteže - zašto postoje opravdani razlozi kao jedan od njih je sama priroda ove sposobnosti. Ipak na generalnom nivou bolji rezultati su bili na početku školske godine. Razlog tome su visoki zahtjevi nastave fizičkog vaspitanja što učiteljice jednostavno nisu u stanju da to iznesu ili pak možda je došlo do pojačanog rasta posebno na kraju školske godine što je rezultovalo sporijem rješavanju motoričkih zadataka. Sve to dokazuje da bi se baterija „EUROFIT“ testova trebala uvrstiti u redovan Nastavni plan i program u tom smislu da se redovno sprovodi u toku svake školske godine jer u tome leži ogroman značaj kako u fizičkom i zdravstvenom statusu svakog učenika ponaosob tako i smislu određenog usmjeravanja u određene grane sporta, kao i planiranja Nastavnog plana i programa. Sticajem okolnosti 2014 godine od strane Prosvjetno pedagoškog zavoda Republike Srpske dobila sam poziv da učestvujem u radnoj grupi za modernizaciju Nastavnog plana i programa. Tražila sam da se baterija „EUROFIT“ uvrsti u redovan Nastavni plan i program i makar sam dobila saglasnost da nastavnici koji žele mogu slobodno da je koriste u svom radu i neće im se smatrati greškom nego upravo bit će pozdravljena njihova inicijativa za modernizovanje samog nastavnog procesa. Samoj mi je dugogodišnja praksa korištenje ove baterije. Što ću obrazložiti i rezultatima na kraju ovog rada. Sama baterija testova EUROFIT i tekako mi pomaže u usmjeravanju djece u razne sportske sekcije kao i stanju njihovih motoričkih sposobnosti na uzrastu od 11 godina kad i radim početna testiranja. Upravo zato testiranja u ovom istraživanju su urađena na mlađem školskom uzrastu gdje su predavači samo učiteljice koje vjerovatno nisu u stanju da ispune zahtjeve nastave fizičkog vaspitanja.

Ključne riječi: primarne motoričke sposobnosti, komparativna analiza.

COMPARATIVE ANALYSIS OF PRIMARY MOTOR SKILLS OF YOUNGER SCHOOL AGE

Mara Banjac¹, Mihajlo Mijanović²

¹Elementary School "Đura Jakšić" Banja Luka, Bosnia and Herzegovina

²Faculty of Physical Education and Sports, Banja Luka, BiH

ABSTRACT

The paper investigated motor skills junior school, both at the beginning and at the end of the school year. The study was to determine whether there is a statistically significant difference between the first and second measurement in motor skills. The first measurement was at the beginning and the other at the end of the school year.

The survey was conducted on a sample of 97 students (45 students and 52 girls) were included. The sample consisted of pupils of junior school age (10 and 11 years). All of them participate actively in the learning process and have classes twice a week.

The sample of variables consisted of a set of seven variables from the space motor skills test: general equilibrium-flamingo, the speed of alternative movements-hand tapping, for flexibility in the hip-bend in gray, for explosive muscle strength - jump from places to repetitive muscle strength and abdominal flexor muscles in the hip-lying-frosty, for a static force of muscles of arms and shoulders in the endurance-chin-ups and agility-pin running 10x 5m. Looking at the individual research has shown that there has been progress in all motor abilities except balancing test, there are good reasons why one of them is the very nature of this ability. On a general level, better results were at the beginning of the school year, is due to the high demands of teaching physical education as teachers are simply unable to express or it may be due to increased growth especially at the end of the school year, which resulted in a slower resolution of motor tasks. All this proves that the battery "EUROFIT" tests should be included in the regular curriculum in the sense that it regularly conducts during each school year because therein lies the enormous importance both in the physical and health status of each student individually and the terms of a routing in certain branches of sport, as well as planning the curriculum and programs.

Coincidentally in 2014 by the Educational and Pedagogical Institute of the Republic of Serbian I received an invitation to participate in the working group for the modernization of the curriculum and program. I'm sure the battery is "EUROFIT" included in the regular curriculum, and although I got approval to teachers who want to be free to use it in your work and will not be considered a mistake but just will be welcomed their initiative to modernize the teaching process. My long-standing practice to use this battery. I will explain the results at the end of this study. The battery of tests EUROFIT certainly helps in guiding children in various sports section as well as the state of their abilities at the age of 11 years and when I do the initial testing. Exactly because testing in this study were performed in the junior grades where teachers only teachers that are probably not able to meet the requirements of physical education.

Keywords: primary motor skills, comparative analysis

EFEKTI PLIOMETRIJSKOG VJEŽBANJA NA EKSPLOZIVNU SNAGU DONJIH EKSTREMITETA MLADIH SPORTISTA

Srećko Stanišić¹, Srboljub Vuković², Ilija Stijepić³

¹Fakultet fizičkog vaspitanja i sporta, Univerzitet u Istočnom Sarajevu

²Fakultet sportskih nauka, Univerzitet Apeiron Banja Luka

³Visoka medicinska škola Prijedor

APSTRAKT

Cilj. Ovaj pregled literature ima za cilj analizirati efekte pliometrijskog treninga na eksplozivnu snagu donjih ekstremiteta među mladim sportistima.

Metod. Pregled literature pomoću baza podataka Google Scholar i PubMed. Radovi su birani na osnovu parametara: intervencije, starosne grupe i datuma objavljivanja.

Rezultati. Pliometrijski trening imao pozitivan uticaj na eksplozivnu snagu donjih ekstremiteta kod adolescentnih sportista, posebno na parametre kao što su CMJ, SLJ i SJ.

Zaključak. Pregled literature sugerira da pliometrijski trening može značajno poboljšati eksplozivnu snagu donjih ekstremiteta među adolescentima. Ovo otkriće može biti korisno za trenere, sportske pedagoge i adolescentne sportiste kako bi bolje razumjeli potencijalne koristi i faktore koji utječu na učinkovitost pliometrijskih vježbi.

Ključne riječi: donji ekstremiteti, pliometrija, adolescentni sportisti

THE EFFECTS OF PLYOMETRIC TRAINING ON THE EXPLOSIVE POWER OF THE LOWER EXTREMITIES OF YOUNG ATHLETES

Srećko Stanišić¹, Srboljub Vuković², Ilija Stijepić³

¹Faculty of Physical Education and Sports, University of East Sarajevo

²Faculty of Sports Sciences, Apeiron University Banja Luka

³Prijedor Medical School

ABSTRACT

The goal. This literature review aims to analyze the effects of plyometric training on lower extremity explosive power among young athletes.

Method. Literature review using *Google Scholar* and *PubMed* databases. Papers were selected based on the parameters: intervention, age group, and date of publication.

Results. Plyometric training has a positive effect on the explosive strength of the lower limbs in adolescent athletes, especially on parameters such as CMJ, SLJ, and SJ.

Conclusion. A review of the literature suggests that plyometric training can significantly improve lower extremity explosive strength among adolescents. This finding may be useful for coaches, sports pedagogues, and adolescent athletes to better understand the potential benefits and factors influencing the performance of plyometric exercises.

Keywords: lower extremities, plyometrics, adolescent athletes;

UTICAJ GRUPNIH FITNES PROGRAMA NA TJELESNU KOMPOZICIJU ŽENA

Srećko Stanišić¹, Sara Lučić², Srboljub Vuković³

¹Srednjoškolski dom Banja Luka

²Fakultet fizičkog vaspitanja i sporta, Univerzitet u Istočnom Sarajevu

³Fakultet sportskih nauka, Univerzitet Apeiron

SAŽETAK

Grupni fitnes programi uživaju veliku popularnost, posebno kod ženske populacije. Cilj rada je bio da se utvrdi uticaj koji grupni fitnes programi imaju na tjelesnu kompoziciju žena. Ovaj rad obuhvata 16 originalnih naučnih radova koji razmatraju uticaj različitih grupnih fitnes programa na tjelesnu kompoziciju žena. Svi obuhvaćeni radovi zadovoljavaju problematiku i jasno prikazuju rezultate u pogledu parametara tjelesne kompozicije. Metod je definisan selekcijom radova između 2008. i 2023. godine koji obuhvataju grupne fitnes programe. Fitnes programi trajanja 4-48 sedmica imaju veliki uticaj na tjelesnu kompoziciju žena. Zaključeno je da grupni fitnes programi pozitivno utiču na tjelesnu kompoziciju žena, smanjuju udio tjelene masti i povećavaju udio mišićne mase bez obzira na starosnu dob, vrstu fitnes programa i trajanje.

Gljučne riječi: Zumba, pilates, joga, indeks tjelesne mase

INFLUENCE OF GROUP FITNESS PROGRAMS ON WOMEN'S BODY COMPOSITION

Srećko Stanišić¹, Sara Lučić², Srboljub Vuković³

¹Secondary school dormitory Banja Luka

²Faculty of Physical Education and Sports, University of East Sarajevo

³Faculty of Sports Sciences, Apeiron University

SUMMARY

Group fitness programs are very popular, especially among the female population. The work aimed to determine the impact that group fitness programs have on the body composition of women. This paper includes 16 original scientific papers examining the impact of various group fitness programs on women's body composition. All included works satisfy the problem and clearly show the results regarding body composition parameters. The method is defined by a selection of works between 2008 and 2023 that include group fitness programs. Fitness programs lasting 4-48 weeks have a great impact on women's body composition. It was concluded that group fitness programs have a positive effect on the body composition of women, reduce the proportion of body fat, and increase the proportion of muscle mass, regardless of age, type of fitness program, and duration.

Keywords: Zumba, pilates, yoga, body mass index;

PRIMENA DOZIRANOG FIZIČKOG OPTEREĆENJA KOD POVREDA KOLENA

Malin Drašković¹, Ognjen Delić¹, Vesko
Drašković²

¹doktorand Medicinskog fakulteta Univerziteta u
Kragujevcu

²Univerzitet UNION "Nikola Tesla"

APSTRAKT

Ciljem unapređenja poboljšanja života mora se razmotriti značaj pokreta koji nije dovoljno izučavan u cilju shvatanja i prihvatanja njegove neophodnosti. Pasivnost u kretanju ima kao rezultat narušavanja svih funkcionalnosti, vitalnosti i moći organizma. Hipokinezija, koja predstavlja nedovoljno kretanje okarakterisana je kao riziko faktor savremenog čoveka. Hipokinetički sindrom predstavlja skup negativnih posledica, a samim tim i povreda. Kroz primenu doziranog fizičkog opterećenja, kod terapije kolena dobijamo prostor za rehabilitaciju, revitalizaciju i terapiju ugrožene koštano-zlobne strukture. Trenažnoj tehnologiji, preko izmerenih uzroka i posledica daje mogućem sistemu rešavanje problema, preko dijagnostikovanja, tretiranja i rešavanja problema savremenog čoveka.

Ključne reči: opterećenje, povreda, koleno, terapija, doziranje

APPLICATION OF DOSED PHYSICAL EXERCISE FOR KNEE INJURIES

Malin Drašković¹, Ognjen Delić¹, Vesko
Drašković²

¹PhD student at the Faculty of Medicine, University of
Kragujevac

²UNION University "Nikola Tesla"

ABSTRACT

In order to promote the improvement of life, the importance of a movement that has not been sufficiently studied in order to understand and accept its necessity must be considered. Passivity in movement results in the impairment of all functionality, vitality and power of the organism. Hypokinesia, which represents insufficient movement, is characterized as a risk factor for modern man. Hypokinetic syndrome represents a set of negative consequences, and therefore injuries. Through the application of dosed physical load in knee therapy, we gain space for rehabilitation, revitalization and therapy of the endangered bone-joint structure. Training technology, through measured causes and consequences, gives a possible problem solving system, through diagnosing, treating and solving the problems of modern man.

Keywords: loading, injury, knee, therapy, dosage

RAZLIKE PARAMETARA ZA PROCJENU NEKIH MORFOLOŠKIH KARAKTERISTIKA I SASTAVA TIJELA KOD STUDENTICA UNIVERZITETA U TUZLI

Kada Delić Selimović¹, Belmin Bujaković²,
Indira Jašarević²

¹Pan-evropski Univerzitet Apeiron, Banja Luka, BiH

²Fakultet tjelesnog odgoja i sporta, Tuzla, BiH

SAŽETAK

Cilj ovog istraživanja je utvrditi postojanje razlika u parametrima za procjenu sastava tijela kod studentica Fakulteta za tjelesni odgoj i sport i studentica Pravnog fakulteta Univerziteta u Tuzli s obzirom na evidentan različit obim svksodnevnih kretnih aktivnosti.

Rezultati dobiveni odgovarajućim matematičko-statističkim procedurama su analizirani u dvije sekcije, i to analiza varijabli koje su imale statistički značajan normalitet distribucije (**T-test**) i analiza rezultata varijabli koje nisu imale statistički značajan normalitet distribucije (**Mann-Whitney test**).

Specifična programska struktura studijskih grupa i različita sportska orijentacija evidentno je rezultirala da se utvrde statistički značajne razlike u većini primijenjenih varijabli.

Takođe veliki broj informacija o morfološkim karakteristikama i sastavu tijela kod ispitanica, koje smo dobili u istraživanju, mogu poslužiti kao kvalitetan razlog za podizanje svijesti o značaju tjelesne aktivnosti kao i praktikovanja zdravih životnih navika, a koje u konačnici stvaraju pozitivne pretpostavke za zdravlje u budućnosti.

Ključne riječi: sastav tijela, studentice, T-test

DIFFERENCES IN PARAMETERS FOR ASSESSING SOME MORPHOLOGICAL CHARACTERISTICS AND BODY COMPOSITION AT THE FEMALE STUDENTS OF THE UNIVERSITY IN TUZLA

Kada Delić Selimović¹, Belmin Bujaković²,
Indira Jašarević²

¹Pan-European University Apeiron, Banja Luka, BiH

²Faculty of Physical Education and Sports, Tuzla, BiH

SUMMARY

The aim of this research is to determine the existence of differences in the parameters for assessing body composition in female students of the Faculty of Physical Education and Sports and female students of the Faculty of Law, University of Tuzla, given the evidently different scope of daily physical activities.

The results obtained by appropriate mathematical-statistical procedures were analyzed in two sections, namely the analysis of variables that had statistically significant normality of distribution (**T-test**) and the analysis of the results of variables that did not have statistically significant normality of distribution (**Mann-Whitney test**). The specific program structure of the study groups and different sports orientation evidently resulted in the determination of statistically significant differences in the majority of applied variables.

Also, a large amount of information about the morphological characteristics and body composition of the test subjects, which we obtained in the research, can serve as a quality reason for raising awareness about the importance of physical activity as well as the practice of healthy lifestyle habits, which ultimately create positive assumptions for health in the future.

Keywords: body composition, female students, T-test

CORRELATION BETWEEN RESULTS OF FALL RISK ASSESSMENT TOOLS AND BODY MASS INDEX IN THE ELDERLY POPULATION

Lidija Slunjski Tišma, Ilija Stijepić

College of Health Sciences Prijedor, Prijedor, Republika Srpska, Bosnia and Herzegovina

ABSTRACT

Background: Falls in elderly are public health problem worldwide.

Aim: To examine the relation between body mass index (BMI) and fall risk assessment tools in elderly population.

Methods: Prospective study included 60 subjects older than 65 from Prijedor. For the purpose of research, Timed Up and Go Test - TUG, 4-Stage Balance Test - 4SBT, Fall Efficacy Scale-International - FES-I, Montreal Cognitive Assessment - MoCA and BMI, were used.

Results: Using correlation analysis, the strength and direction of the linear relation between tests results and BMI, was tested. Weak negative correlation was obtained between FES-I and BMI $r = -0.018$, Sig. = 0.891, small positive correlation $r = 0.060$, Sig. = 0.649 between TUG and BMI, small negative correlation $r = -0.103$, Sig. = 0.433 between 4SBT and BMI, strong positive relation between FES-I and TUG $r = 0.540$, Sig. = 0.000, medium negative relation $r = -0.434$, Sig. = 0.001 between FES-I and 4SBT, between FES-I and MoCa $r = -0.326$, Sig. = 0.011, between TUG and 4SBT $r = -0.452$, Sig. = 0.000, small negative relation between TUG and MoCA $r = -0.179$, Sig. = 0.172, small positive relation between 4STB and MoCA $r = 0.073$, Sig. = 0.581.

Conclusion: There is no statistically significant correlation between BMI and other parameters.

Key words: elderly population, falls, BM

FIZIČKO VEŽBANJE U SLUŽBI LEPOTE TELA I DUŠE

Vladan Vođević¹, Aleksandar Gadžić², Srboljub Vuković³

¹Akademija strukovnih studija Beograd, Odsek Visoka zdravstvena škola, Beograd, Srbija

²Univerzitet Singidunum, Fakultet za fizičku kulturu i menadžment u sportu, Beograd, Srbija
³Panevropski Univerzitet Apeiron, Fakultet sportskih nauka, Banja Luka, BiH

SAŽETAK

Fenomen lepog je, od davnina do danas, bila i ostala kontrapozitivna tema koja se kao kategorija hronološki i kulturološki normativno menjala. Ono što je vremenski ipak nepromenljivo je neprekidno socijalno stremljenje ka lepom kao vrsti bonusa koji ljudskom biću daje prednost na socijalnom planu. U potrazi za lepim kroz spoljašnje fizičke odlike zanemaruje se samorazvoj i negovanje unutrašnje lepote kojim se postiže najvažniji aspekt ljudske lepote, samopouzdanje. Favorizovanje isključivo spoljašnje lepote i zapostavljanje unutrašnje često je kontraproduktivno, imajući u vidu da je spoljašnja lepota upravo izraz unutrašnjosti, te da zajedno čine celinu koja je jedinstvena, neponovljiva i samim tim posebna i lepa. Osnovni uslov za ostvarivanje ovog ideala je fizičko i duhovno zdravlje čoveka. Lepota i zdravlje kao jedan skladan spoj nisu „izum“ 21. veka – u tu dobitnu kombinaciju veruje se od davnina. Poznati filozofi starog veka (Egipćani i Grci) zagovarali su u osnovi humanističke ideje o potrebi harmoničnog razvoja ličnosti, o simbiozi tela i duha kroz procese vežbanja za optimalan i skladan razvoj čoveka, smatrajući da je „telo važno vežbati“, te da se vežbanjem ostvaruju vaspitne komponente i estetske, emocionalne i moralne vrednosti. Čovek je oduvek upražnjavao prirodne oblike kretanja kao neizbežan sadržaj svakodnevnog životnog režima, samo su se sadržaji i forme menjali kroz vreme. Međutim, bez obzira na forme, fizičko vežbanje, posebno njegov najprirodniji oblik, hodanje, mora biti zadržano kao svesna svakodnevna aktivnost kroz čitav život, jer „pokret po svom delovanju zamenjuje svako terapijsko sredstvo, dok sva lekovita sredstva ne mogu da zamene pokret“, te samo uz aktivnosti zdravo telo postaje izvor radosti i životne energije.

Usmerenje ovog saopštenja je fokusirano na kvalitativnu teorijsku eksplikaciju važnosti činilaca koji determinišu fizičko vežbanje kao bitan faktor za unapređenje zdravlja, i lepote tela i duše.

KLjučne reči: fizičko vežbanje, zdravlje, telo, duša, lepota

PHYSICAL EXERCISE IN THE SERVICE OF THE BEAUTY OF BODY AND SOUL

Vladan Vođević¹, Aleksandar Gadžić², Srboljub Vuković³

¹Academy of Vocational Studies Belgrade, College of Health Sciences, Belgrade

²Singidunum University, Faculty of Physical Education and Sports Management

³Pan-European University Apeiron, Faculty of Sports Sciences, Banja Luka, Bosnia and Herzegovina

SUMMARY

From ancient times to the present day, the phenomenon of beauty has been and remains a controversial topic that has been chronologically and culturally normatively changed as a category. What stays the same in time, however, is the continuous social aspiration towards the beautiful as a kind of bonus that gives the human being an advantage on the social level. In the search for beauty through external physical features, self-development and nurturing of inner beauty, by which we achieve the most important aspect of human beauty - self-confidence, are being neglected. Favouring only external beauty and neglecting inner beauty is often counterproductive, bearing in mind that external beauty is precisely the expression of the inner beauty, and that together they form a whole that is unique, unrepeatable and therefore special and beautiful. The basic condition for the realisation of this ideal is the physical and spiritual health of man. Beauty and health as one harmonious combination are not an "invention" of the 21st century - this combination has been believed in since ancient times. Famous philosophers of the old age (Egyptians and Greeks) advocated fundamentally humanistic ideas about the need for harmonious development of personality, about the symbiosis of body and spirit through the processes of exercise for optimal and harmonious development of a person, believing that "the body is important to practise", and that through exercise educational components and aesthetic, emotional and moral values are realised. People have always practised the natural forms of movement as the inevitable content of the daily life regime, only the contents and forms have changed over time. However, regardless of forms, physical exercise, especially its most natural form, walking, must be retained as a conscious daily activity throughout life, because "movement by its action replaces any therapeutic means, while all healing means cannot replace movement", and only with activity does a healthy body become a source of joy and life energy.

The focus of this press release is on the qualitative theoretical explanation of the importance of factors that determine physical exercise as an important factor for improving the health and beauty of the body and soul.

Keywords: physical exercise, health, body, soul, beauty

NIVO FIZIČKE AKTIVNOSTI I KVALITETA SNA KOD OSOBA LEČENIH HRONIČNIM HEMODIJALIZAMA

Sanja Stanimirović¹, Ljubica Ristanović²,
Jasna Trbojević Stanković³

¹Sportsko Udruženje „Mia Body Space“, Valjevo, Srbija

²Univerzitet u Beogradu – Fakultet sporta i fizičkog
vaspitanja, Beograd, Srbija

³KBC „Dr Dragiša Mišović – Dedinje“, Beograd, Srbija

APSTRAKT

S obzirom da fizička aktivnost i kvalitet sna imaju veoma važan uticaj na zdravlje svakog čoveka, zanimljivo je ispitati ove navike kod bolesnika sa terminalnom bubrežnom insuficijencijom lečenim hroničnim hemodijalizama.

Cilj ovog istraživanja je bio da proceni nivo fizičke aktivnosti i kvaliteta sna, kao i njihovu povezanost, kod bolesnika sa terminalnom bubrežnom bolešću, lečenih hroničnim hemodijalizama. Uzorak ispitanika je činila 71 osoba, muškog (n=31) i ženskog pola (n=40), koji su lečeni hroničnim hemodijalizama u KBC „Dr Dragiša Mišović – Dedinje“.

Nivo fizičke aktivnosti je procenjen primenom standardizovanog Međunarodnog upitnika o fizičkoj aktivnosti (IPAQ), dok je kvalitet sna procenjen primenom Pitsburškog indeksa kvaliteta sna (PSQI). Rezultati ukazuju na nizak nivo fizičke aktivnosti kod 42% bolesnika, umeren kod 30%, a visok kod 28% bolesnika. Loš kvalitet sna imalo je 47% bolesnika. Bolesnici sa višim nivoom fizičke aktivnosti su češće imali dobar kvalitet sna, ali nije utvrđena statistički značajna korelacija između indeksa kvaliteta sna i nivoa fizičke aktivnosti ($\rho=0,06$; $p=0,96$).

Rezultati naše studije ukazuju na nizak nivo fizičke aktivnosti, kao i loš kvalitet sna kod skoro svakog drugog bolesnika lečenog hroničnom dijalizom. Stručnjaci u medicini koji rade sa ovom populacijom bi trebalo da osmisle program edukacije koji bi podigao svest o važnosti fizičke aktivnosti i kvaliteta sna na viši nivo, kao i ukazao na jasne postupke kako bi se ove navike mogle poboljšati.

Ključne reči: fizička aktivnost, san, dijaliza

LEVEL OF PHYSICAL ACTIVITY AND QUALITY OF SLEEP IN PERSONS TREATED WITH CHRONIC HEMODIALYSIS

Sanja Stanimirović¹, Ljubica Ristanović²,
Jasna Trbojević Stanković³

¹Sports Association "Mia Body Space" Valjevo, Serbia

²University of Belgrade – Faculty of Sports and Physical
Education, Belgrade, Serbia

³KBC "Dr. Dragiša Mišović – Dedinje", Belgrade, Serbia

ABSTRACT

Given that physical activity and sleep quality have a very important impact on the health of every person, it is interesting to examine these habits in patients with terminal renal failure treated with chronic hemodialysis.

The aim of this study was to evaluate the level of physical activity and quality of sleep, as well as their relationship, in patients with terminal kidney disease, treated with chronic hemodialysis. The sample of respondents consisted of 71 persons, male (n=31) and female (n=40), who were treated with chronic hemodialysis at KBC "Dr. Dragiša Mišović – Dedinje".

The level of physical activity was assessed using the standardized International Physical Activity Questionnaire (IPAQ), while the quality of sleep was assessed using the Pittsburgh Sleep Quality Index (PSQI). The results indicate a low level of physical activity in 42% of patients, moderate in 30%, and high in 28% of patients. 47% of patients had poor sleep quality. Patients with a higher level of physical activity more often had good sleep quality, but no statistically significant correlation was found between the index of sleep quality and the level of physical activity ($\rho=0.06$; $r=0.96$).

The results of our study indicate a low level of physical activity, as well as a poor quality of sleep in almost every other patient treated with chronic dialysis. Medical professionals who work with this population should design an education program that would raise awareness of the importance of physical activity and sleep quality to a higher level, as well as indicate clear procedures to improve these habits.

Keywords: physical activity, sleep, dialysis

ULOGA FIZIČKOG VASPITANJA U SMANJENJU ADHD SINDROMA KOD DJECE ŠKOLSKOG UZRASTA

Olivera Krivokapić

JU OŠ Ratko Žarić, Nikšić, Crna Gora

SAŽETAK

Poremećaj pažnje i hiperaktivnosti (ADHD) koji karakteriše razvojno neodgovarajući nivo pažnje, hiperaktivnost i impulsivnost, smatra se jednim od najčešćih neurorazvojnih poremećaja u školskom uzrastu.

Broj djece sa dijagnozom ADHD je u konstantnom porastu u većini razvijenih i zemalja u razvoju.

Ovaj poremećaj često ima komorbiditete sa drugim neurorazvojnim poremećajima kao što su poremećaj ponašanja, specifični poremećaji učenja, depresija, anksioznost i poremećaji raspoloženja.

Globalna stopa prevalencije ADHD je preko 5% i oko tri puta je češća kod muškaraca nego kod žena. Simptomi poremećaja pažnje i hiperaktivnosti se mogu smatrati ograničenjima za akademski napredak.

Prema brojnim istraživanjima fizička aktivnost može pomoći u poboljšanju simptoma i omogućiti učenicima da se bolje fokusiraju na školske i druge svakodnevne obaveze. Iz tog razloga, ovaj rad je posvećen analizi pozitivnih uticaja organizovanog fizičkog vježbanja na ADHD sindrom djece školskog uzrasta kroz pregled nekih referentnih istraživačkih studija.

Gljučne riječi: poremećaj pažnje, hiperaktivnost, školski uzrast, fizičko vježbanje

THE ROLE OF PHYSICAL EDUCATION IN REDUCING ADHD SYNDROME IN SCHOOL-AGE CHILDREN

Olivera Krivokapić

JU Primary School Ratko Žarić, Nikšić, Montenegro

ABSTRACT

Attention Deficit Hyperactivity Disorder (ADHD), characterized by developmentally inappropriate levels of attention, hyperactivity, and impulsivity, is considered one of the most common neurodevelopmental disorders in school-aged children.

The number of children diagnosed with ADHD is steadily increasing in most developed and developing countries.

This disorder often coexists with other neurodevelopmental disorders such as conduct disorder, specific learning disorders, depression, anxiety, and mood disorders.

The global prevalence rate of ADHD is over 5%, and it is about three times more common in males than in females. Symptoms of attention deficit and hyperactivity disorder can hinder academic progress.

According to numerous studies, physical activity can help alleviate symptoms and enable students to better focus on school and other daily tasks. Therefore, this paper is dedicated to analyzing the positive impacts of organized physical exercise on ADHD syndrome in school-aged children through a review of some key research studies.

Key words: attention deficit, hyperactivity, school-age, physical exercise

ANALIZA ZNAČAJA RAZLIKA MENADŽERA RAZLIČITIH FUNKCIONALNIH KOMPETENCIJA U SPORTSKIM KLUBOVIMA

Dženan Šuta¹, Damir Đedović², Goran
Grahovac³

¹Sportski savez Grada Mostara, Bosna i Hercegovina

²Pedagoški fakultet Univerziteta «Džemal Bijedić» u
Mostaru, Bosna i Hercegovina

³Fakultet tjelesnog odgoja i sporta Sveučilišta u Banjoj
Luci, Bosna i Hercegovina

SAŽETAK

Ovo istraživanje urađeno je kao transverzalna studija s ciljem da se analiziraju i utvrde značajnosti razlika na univarijantnom nivou menadžera sa različitim funkcionalnim integracijama u sportskim klubovima sa područja Županije Zapadno Hercegovačke. Na uzorku od 250 ispitanika analizirana je unutrašnja i vanjska organizacija sportskih klubova na sva tri nivoa menadžmenta sa područja Županije Zapadno Hercegovačke. Na osnovu rezultata ovog istraživanja možemo zaključiti da rezultati gotovo svih ispitivanih varijabli imaju karakteristiku homogenih rezultata. Rezultati nezavisnih uzoraka univarijantne analize varijance za tri različita nivoa menadžera sportskih klubova i saveza na području Županije Zapadno Hercegovačke pokazali su da samo kod tri od četrdeset tri korištene varijable imaju statistički značajnu razliku. Svi ispitanici na sva tri nivo menadžmenta dali dosta homogene odgovore na postavljena pitanja, što možemo vidjeti ukoliko usporedimo kolonu varijance sa aritmetičkom sredinom.

Ključne riječi: menadžeri, sportski klubovi, analiza, razlike

ANALYSIS OF THE SIGNIFICANCE OF THE DIFFERENCES OF MANAGERS WITH DIFFERENT FUNCTIONAL COMPETENCES IN SPORTS CLUBS

Dženan Šuta¹, Damir Đedović², Goran
Grahovac³

¹Sports Association of the City of Mostar, Bosnia and
Herzegovina

²Faculty of Education, University «Džemal Bijedić» in
Mostar, Bosnia and Herzegovina

³Faculty of Physical Education and Sports, University of
Banja Luka, Bosnia and Herzegovina

ABSTRACT

This research was conducted as a transversal study with the aim of analyzing and determining the significance of the differences at the univariate level of managers with different functional integrations in sports clubs from the area of West Herzegovina County. On a sample of 250 respondents, the internal and external organization of sports clubs at all three levels of management from the area of West Herzegovina County was analyzed. Based on the results of this research, we can conclude that the results of almost all examined variables have the characteristic of homogeneous results. The results of independent samples of the univariate analysis of variance for three different levels of managers of sports clubs and associations in the area of West Herzegovina County showed that only three out of forty-three used variables have a statistically significant difference. All respondents at all three levels of management gave quite homogeneous answers to the question, which we can see if we compare the variance column with the arithmetic mean.

Keywords: managers, sports clubs, analysis, differences

METODSKI POSTUPCI I KORIŠTENJE PLIVAČKIH POMAGALA U OBUCI DJECE NEPLIVAČA UZRASTA 8-9 GODINA

Stefan Čavić¹, Senad Bajrić²

¹Student II ciklusa Panevropski univerzitet Apeiron, Fakultet sportskih nauka, Banja Luka, Bosna i Hercegovina

²Panevropski univerzitet Apeiron, Fakultet sportskih nauka, Banja Luka, Bosna i Hercegovina

SAŽETAK

Plivanje je jedna od najstarijih ljudskih aktivnosti. Od nastanka čovjeka plivanje je usko vezano za njegov opstanak, a kasnije se razvilo kao primarna potreba čovjeka. Stručnjaci ističu kako je plivanje ljudima urođeno, a da je jedina prepreka kod učenja plivanja strah. Plivanje postaje sve više civilizacijska potreba sa stanovišta obrazovanja i postaje puno popularnije u odnosu na vrijeme kada je imalo drugačiju svrhu.

Postoje brojni dokazi za takvo mišljenje od bezbjednosnih, zdravstvenih i drugih razloga. Obuci neplivača potrebno je posvetiti mnogo više pažnje nego što je ona danas prisutna. Zaista je znanje plivanja na današnjem nivou življenja neophodna potreba.

Obuku neplivača potrebno je intenzivirati na svim nivoima i kroz sve vidove aktivnosti (Bajrić i sar. 2015).

U obuci neplivača intenzifikacija je moguća primjenom različitih operatora kao i uvođenje različitih oblika rada uz najčešće korišten frontalni oblik rada, zatim dobrom organizacijom korištenja vremena na bazenu, smanjenjem gubljenja vremena za prozivanje učenika, unaprijed pripremljenim pomagali-ma za nastavu, umjesto korištenja opšte pripremnih vježbi na suhom treba koristiti specifične vježbe u službi učenja novih motoričkih struktura, uvođenjem više igara po potrebi u različitim dijelovima sata itd. Intenzifikacija u poduci neplivača može se postići i koncentracijom nastavnih sati, tj. učestalošću dolazaka na bazen kao i brojem sati (Grčić-Zubčević, 1997; 2006; Findak, 2007).

Osnovni cilj ovog rada odnosi se na prikaz jednog od mogućih metoda obuke neplivača i primjerenih sredstava (pomagala) sa djecom uzrasta 8–9 godina.

Ključneriječi: metodski postupci, neplivači, obuka

METHODOLOGICAL PROCEDURES AND THE USE OF SWIMMING IN THE TRAINING OF CHILDREN NON-SWIMMER AGE 8-9 YEARS OLD

Stefan Čavić¹, Senad Bajrić²

1Student of the II cycle of the Pan-European University Apeiron, Faculty of Sports Sciences, Banja Luka, Bosnia and Herzegovina

2Pan-European University Apeiron, Faculty of Sport Sciences, Banja Luka, Bosnia and Herzegovina

SUMMARY

Swimming is one of the oldest human activities. Since the beginning of man, swimming has been closely related to his survival, and later it developed as a primary human need. Experts point out that swimming is innate to humans, and that the only obstacle in learning to swim is fear. Swimming is becoming more and more a civil need from the point of view of education and is becoming much more popular compared to a time when it had a different purpose. There is numerous evidence for such an opinion for safety, healthy and other reasons. The training of non-swimmers need to be given much more attention than it is today. Indeed, knowing how to swim is a necessary necessity in today's standard of living.

The training of non-swimmers needs to be intensified at all levels and through all types of activities (Bajrić et al. 2015).

In the training of non-swimmers, intensification is possible through the use of different operators as well the introduction of different forms of work with the most commonly used frontal form of work, then by good organization of the use of time in the pool, by reducing the loss of time for calling students, pre-prepared aids for teaching, instead of using general preparatory exercises on dry land specific exercises should be used in the service of learning new motoric structure, by introducing more games as needed in different parts of the class, etc. Intensification in teaching non-swimmers can be achieved I concentration of teaching hours, i.e. frequency of visits to the pool as well as the number of hours (Grčić-Zubčević, 1997; 2006; Findak, 2007). The main goal of this work is to describe one of the possible methods of training non-swimmers and appropriate means(aids) with children aged 8-9 years.

Key words: methodological procedures, non-swimmers, training

TAKTIKA INDIVIDUALNIH POSTUPAKA ODBOJKAŠA U FAZI KOMPLEKSA IGRE K1

Sara Obradović¹, Darko Božić²

¹Studentica drugog ciklusa studija, Panevropski Univerzitet „Apeiron“, Fakultet spirtske nauke, Banja Luka, Bosna i Hercegovina

²Panevropski Univerzitet „Apeiron“, Fakultet spirtske nauke, Banja Luka, Bosna i Hercegovina

SAŽETAK

Sistem pripreme sportista za takmičenje u bilo kojem sportu uključuje nekoliko vrsta priprema (fizičku, tehničku, taktičku, psihološku, teoretsku, trenažni proces, oporavak) koje treba posmatrati kao jedinstvenu i nerazdvojnu cjelinu. U tom sistemu pripreme sportista za takmičenje, značajno mjesto zauzima taktička priprema. Pod taktičkom pripremom podrazumijeva se smišljen i planski organizovan trenažni proces sa ciljem sticanja znanja, umijanja, navika, taktičkih djelovanja i razvijanja taktičkog mišljenja za efikasno vođenje sportske borbe u procesu takmičenja. Svrha taktičke pripreme jeste da se maksimalno iskoriste individualne sposobnosti svakog igrača i da se takve individualne sposobnosti uspješno ugrade u timsko djelovanje ekipe bez obzira na poziciju koju igra kako bi se ostvario željeni cilj a to je pobjeda nad protivnikom.

Taktika u odbojci predstavlja zajedničko i svrsishodno djelovanje pojedinaca, linija i grupa igrača radi uspješnog rješavanja situacijskih problema u fazi igre kompleksa K-1 i fazi kompleksa K-2.

Osnovni cilj rada odnosi se na taktičku pripremu odbojkaša kroz prikaz individualnih taktičkih djelovanja i postupaka za vrijeme odigravanja sportske borbe fazi igre kompleksa K-1.

Ključne riječi: odbojka, taktička priprema, individualna taktika, sportska borba.

ACTICS OF INDIVIDUAL PROCEDURES OF VOLLEYBALL PLAYERS IN THE COMPLEX PHASE OF THE GAME K1

Sara Obradović¹, Darko Božić²

¹Student of the second cycle of studies, Pan-European University "Apeiron", Faculty of Spiritual Sciences, Banja Luka, Bosnia and Herzegovina

²Pan-European University "Apeiron", Faculty of Spiritual Sciences, Banja Luka, Bosnia and Herzegovina

SUMMARY

The system of preparation of athletes for competitions in any sport includes multiple types of preparation (physical, technical, tactical, psychological, theoretical, training process, rest) which should be considered a unique and inseparable whole. In that system of preparation of athletes for competitions, a very significant place is taken by tactical preparation. Tactical preparation includes a designed and planned training process to acquire knowledge, skill, habit, tactical actions and development of tactical thinking for effective leadership of sports play in the process of competition.

The aim of tactical preparation is to maximally utilise the individual skills of each player and that those individual skills are successfully embedded in the teamwork regardless of the position that the individual plays to accomplish the desired goal which is to win against the opponent.

Tactics in volleyball present joint and appropriate action of individuals, lines of players to successfully solve the situational issue in the phase of the game of the complex K-1.

The primary goal of the process refers to the tactical preparation of volleyball players through the display of individual, group and team tactical actions and procedures during the sports play in the phase of the game of complex K-1 and the phase of the complex K-2.

Keywords: volleyball, tactical preparation, individual tactics, sports play.

CHANGING THE MENTALITY FOR PEOPLE WITH LIMITED ABILITIES THROUGH SPORTS

Gentijana Paçarizi¹, Xheneta Jashari, Nedeljko Stanković²

¹Faculty of Physical Culture and Sport, AAB College, Kosovo

²Faculty of Health Sciences, European University "Kallos" Tuzla, Bosnia and Herzegovina

ABSTRACT

The main point of this research is the awareness of young people about disabilities, which is a sensitive topic. The results of this research show us that the students who participated in a project with 6 physical activities, have received a lot of information, as well as changed their skills and mindsets regarding disabilities. Sport is a powerful tool to convey educational messages that will stay with people throughout their lives. Many people are not aware of all types of disabilities. If they hear the term "disabilities", they will immediately think of a physical ability and forget about other types of disabilities, which is sometimes difficult to be noticed immediately as: cognitive disabilities, conative disabilities and sensory disabilities. There are many cases when children with disabilities are excluded from various activities in life only because the structuring of these activities is in such a form that it excludes them from participating in these activities even though it is their right, this is a typical case of an unfair equality. Changing the rules of activities is not prohibited if it enables us to achieve inclusiveness. An inclusive activity is when everyone's needs are met and they can all participate in the activities without problem. Although some of the participants may have some special needs, some of the rules should be changed so that they can be part of the activity. This may not seem fair, but it is justice and it is the children's right. Trying to include people with disabilities is a way to respect their rights and allow them to participate fully in life and society. The results of this project are divided into 3 different categories which are: information, skills and change of mentality. From the survey we can see that all 3 results have been successfully achieved.

Key words: disabilities, activities, justice, inclusiveness, mentality, knowledge, sports, skills

DIFFERENCES IN SOME ANTHROPOMETRIC AND MOVEMENT SKILLS MEASUREMENTS IN YOUNG BASKETBALL AND VOLLEYBALL PLAYERS

Fatbardh Ajvazi¹, Fatmir Pireva¹, Ardita Pireva²

¹Faculty of Physical Culture and Sport, AAB College, Kosovo

²Social Gymnasium "Ahmet Gashi" Prishtina

ABSTRACT

Purpose: This research aims to verify the differences of some anthropometric characteristics and basic movement skills of basketball players and volleyball players.

Methods: Children aged 12-16 years, from the basketball club "KB DRITA" (50), and the Volleyball club "KV DRITA" (50), of the male gender, were included in the research. The methods applied in order to accomplish the tasks presented in this paper are: statistical descriptive method (parameters of central tendency, distribution and correlations), regression analysis, as well as the T-test method for validating changes between schools. The results were processed in the SPSS 27.0.

Results: In the anthropometric space, significant statistical changes were presented in all variables, except for the thigh circumference variable, and these changes are in favor of basketball players. Even in the movement space, significant statistical changes were presented in all variables, except for the variable of jumping from place to length, and these changes are in favor of basketball players.

Conclusion: Based on the values obtained in the anthropometric parameters, it can be said that the biological development and growth of these young people is normal for their age. The distribution of the results obtained in the anthropometric and movement variables is normal, with little asymmetry and mostly positive. Based on the above results, it can be seen that the arithmetic averages of the anthropometric and movement variables of the groups differ among themselves, and this difference is almost in all variables in favor of the basketball players.

Key words: Basketball players, Volleyball player, Anthropometry, Movement, Differences, T-test