

TRANSFORMACIONI PROCESI FUNKCIONALNIH SPOSOBNOSTI I NEKIH SEGMENTA SNAGE KOD SPORTISTA U SPORTSKIM IGRAMA I BORILAČKIM SPORTOVIMA POD UTICAJEM SPECIFIČNOG TRENAŽNOG PROGRAMA

Sažetak:

Transformacioni procesi predstavljaju složene, višedimenzionalne adaptivne promjene koje se odvijaju unutar organizma sportista tokom planski i sistematski vođenog trenažnog procesa. Ove promjene obuhvataju razvoj funkcionalnih sposobnosti, unapređenje različitih segmenata snage (eksplozivne, statičke i repetitivne), poboljšanje tehničko–taktičkih elemenata te povećanje specifične i opće izdržljivosti. Njihova uloga je od presudnog značaja u optimizaciji sportskih performansi i prilagođavanju mladih sportista specifičnim zahtjevima pojedine sportske discipline, posebno u razvojno osjetljivom periodu rane adolescencije. Borilački sportovi, poput juda i karatea, dominantno razvijaju eksplozivnu i statičku snagu, koordinaciju, ravnotežu i mentalnu stabilnost kroz intenzivne, situacione i tehnički zahtjevne trenažne sadržaje. Sportske igre, kao što su fudbal i košarka, usmjerene su na razvoj aerobne i anaerobne izdržljivosti, agilnosti, brzine, timske saradnje i taktičke organizacije igre, uz česte promjene intenziteta i pravca kretanja. Istraživanje je provedeno na uzorku od 70 mladih sportista uzrasta od 12 do 14 godina, podijeljenih u dvije grupe: borilačke sportove i sportske igre. Analizirana je struktura tromjesečnog specifičnog trenažnog programa zasnovanog na principu progresivnog opterećenja, jasno definisanim sadržajima rada, kontrolisanom volumenu i intenzitetu te naglašenom individualnom pristupu. Obrada podataka izvršena je u statističkom programu SPSS 25.0 primjenom deskriptivne statistike, koeficijenata zakrivljenosti i izduženosti, univarijantnog t-testa za zavisne uzorke te diskriminativne analize pod modelom razlika. Dobijeni rezultati ukazuju na značajne transformacione promjene u funkcionalnim sposobnostima i segmentima snage nakon realizacije programa, pri čemu je evidentiran visok nivo senzitivnosti primijenjenog trenažnog stimulansa. Potvrđena je hipoteza o postojanju razlika između sportista sportskih igara i borilačkih sportova, čime se dodatno naglašava značaj diferenciranog, sport-specifičnog i razvojno usklađenog pristupa planiranju i programiranju treninga. Rezultati istraživanja potvrđuju da pravilno strukturirani, progresivni i individualizirani trenažni programi predstavljaju temelj za optimalan razvoj mladih sportista u periodu intenzivnih bioloških i neuromuskularnih adaptacija.

Ključne riječi: adaptacije, kondicija, snaga, mladi sportisti, trening

TRANSFORMATIONAL PROCESSES OF FUNCTIONAL ABILITIES AND CERTAIN STRENGTH COMPONENTS IN ATHLETES OF TEAM SPORTS AND COMBAT SPORTS UNDER THE INFLUENCE OF A SPECIFIC TRAINING PROGRAM

Abstract:

Transformational processes represent complex, multidimensional adaptive changes that occur within athletes during a systematically planned and programmed training process. These changes include the development of functional abilities, improvement of various strength segments (explosive, static, and repetitive), enhancement of technical–tactical skills, and increased specific and general endurance. Their role is crucial in optimizing sports performance and adapting young athletes to the specific demands of different sports disciplines, particularly during the sensitive developmental period of early adolescence. Martial arts, such as judo and karate, predominantly develop explosive and static strength, coordination, balance, and mental stability through intensive and technically demanding training content. Team sports, including football and basketball, emphasize aerobic and anaerobic endurance, agility, speed, teamwork, and tactical organization, characterized by frequent changes in intensity and movement patterns.

The research was conducted on a sample of 70 young athletes aged 12 to 14 years, divided into martial arts and team sports groups. A three-month specific training program based on progressive overload, clearly structured training content, controlled volume and intensity, and an individualized approach was analyzed. Data processing was carried out using SPSS 25.0, applying descriptive statistics, skewness and kurtosis coefficients, paired samples t-tests, and discriminant analysis under the difference model. The results indicate statistically significant transformational changes in functional abilities and strength segments following the implementation of the program, demonstrating a high sensitivity of the applied training stimulus. The hypothesis of differences between athletes from team sports and martial arts was confirmed, emphasizing the importance of sport-specific, differentiated, and developmentally appropriate training approaches. The findings confirm that properly structured, progressive, and individualized training programs represent a fundamental prerequisite for optimal development of young athletes during a period characterized by intensive biological and neuromuscular adaptations.

Keywords: adaptations, fitness, strength, youth athletes, training