

UNIVERZITET U BEOGRADU – FAKULTET ZA SPECIJALNU EDUKACIJU I REHABILITACIJU  
UNIVERSITY OF BELGRADE – FACULTY OF SPECIAL EDUCATION AND REHABILITATION

# 10. MEĐUNARODNI NAUČNI SKUP

Specijalna edukacija  
i rehabilitacija DANAS

**Zbornik rezimea**

10<sup>th</sup> INTERNATIONAL  
SCIENTIFIC CONFERENCE

Special Education  
and Rehabilitation TODAY

**Book of abstracts**

Beograd, 25–26. oktobar 2019. godine  
Belgrade, October, 25–26<sup>th</sup>, 2019

UNIVERZITET U BEOGRADU – FAKULTET ZA SPECIJALNU EDUKACIJU I REHABILITACIJU  
UNIVERSITY OF BELGRADE – FACULTY OF SPECIAL EDUCATION AND REHABILITATION

Beograd, 2019.  
Belgrade, 2019



UNIVERZITET U BEOGRADU – FAKULTET ZA  
SPECIJALNU EDUKACIJU I REHABILITACIJU  
UNIVERSITY OF BELGRADE – FACULTY OF  
SPECIAL EDUCATION AND REHABILITATION

10. MEĐUNARODNI NAUČNI SKUP  
SPECIJALNA EDUKACIJA I REHABILITACIJA DANAS  
Beograd, 25–26. oktobar 2019. godine

**ZBORNİK REZİMEA**

10<sup>th</sup> INTERNATIONAL SCIENTIFIC CONFERENCE  
SPECIAL EDUCATION AND REHABILITATION TODAY  
Belgrade, October, 25–26<sup>th</sup>, 2019

**BOOK OF ABSTRACTS**

Beograd, 2019.  
Belgrade, 2019

10. MEĐUNARODNI NAUČNI SKUP  
SPECIJALNA EDUKACIJA I REHABILITACIJA DANAS  
BEOGRAD, 25–26. OKTOBAR 2019. GODINE  
ZBORNİK REZIMEA

10<sup>th</sup> INTERNATIONAL SCIENTIFIC CONFERENCE  
SPECIAL EDUCATION AND REHABILITATION TODAY  
BELGRADE, OCTOBER, 25–26<sup>th</sup>, 2019  
BOOK OF ABSTRACTS

IZDAVAČ / PUBLISHER

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju  
University of Belgrade – Faculty of Special Education and Rehabilitation

ZA IZDAVAČA / FOR PUBLISHER

Prof. dr Snežana Nikolić, dekan

GLAVNI I ODGOVORNI UREDNIK / EDITOR-IN-CHIEF

Prof. dr Mile Vuković

UREDNICI / EDITORS

Prof. dr Vesna Žunić Pavlović  
Prof. dr Aleksandra Grbović  
Prof. dr Vesna Radovanović

RECENZENTI / REVIEWERS

Prof. dr Ranko Kovačević, prof. dr Vesna Bratovčić  
*Univerzitet u Tuzli – Edukacijsko-rehabilitacijski fakultet, Tuzla, BiH*  
Prof. dr Viviana Langher  
*Università Sapienza di Roma – Facoltà di Medicina e Psicologia, Roma, Italia*  
Prof. dr Branislava Popović Čitić, doc. dr Slobodan Banković, doc. dr Ljubica Isaković  
*Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija*

LEKTURA I KOREKTURA / PROOFREADING AND CORRECTION

Maja Ivančević Otanjac, predavač

DIZAJN I PRIPREMA / DESIGN AND PROCESSING

Mr Boris Petrović  
Biljana Krsić

Zbornik rezimea biće publikovan u elektronskom obliku CD

Book of abstracts will be published in electronic format CD

Tiraž / Circulation: 200

ISBN 978-86-6203-130-3

---

Objavlјivanje Zbornika rezimea podržalo je Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

---

## PROGRAMSKI ODBOR

### **PRESEDNIK PROGRAMSKOG ODBORA:**

Dr Snežana Nikolić, redovni profesor,  
dekan  
Univerzitet u Beogradu – Fakultet za  
specijalnu edukaciju i rehabilitaciju,  
Beograd, Srbija

### **ČLANOVI PROGRAMSKOG ODBORA sa Univerziteta u Beogradu – Fakulteta za specijalnu edukaciju i rehabilitaciju:**

- Dr Vesna Žunić Pavlović, redovni profesor,  
prodekan za nauku
- Dr Gordana Odović, redovni profesor,  
prodekan za nastavu
- Dr Danijela Ilić Stošović, redovni profesor
- Dr Branislava Popović Čitić, redovni  
profesor
- Dr Vesna Vučinić, vanredni profesor
- Dr Sanja Dimoski, vanredni profesor
- Dr Bojan Dučić, docent
- Dr Marija Jelić, docent
- Dr Tamara Kovačević, docent

### **ČLANOVI PROGRAMSKOG ODBORA iz inostranstva:**

- Др Дмитриев Алексей Андреевич,  
профессор, декан  
Московский государственный  
областной университет – Факультет  
специальной педагогики и психологии,  
Москва, Россия
- Dr Milan Kulić, redovni profesor, dekan  
Univerzitet u Istočnom Sarajevu –  
Medicinski fakultet Foča, Foča, Republika  
Srpska, Bosna i Hercegovina
- Dr Mitja Krajncan, redni profesor,  
prodekan za kakovost in razvoj  
Univerza na Primorskem – Pedagoška  
fakulteta, Koper, Slovenija
- Др Зора Јачова, редовни професор  
Универзитет „Св. Кирил и Методиј“ –  
Филозофски факултет, Скопје, Северна  
Македонија
- Dr Ante Bilić-Prcić, izvanredni profesor  
Sveučilište u Zagrebu – Edukacijsko-  
rehabilitacijski fakultet, Zagreb, Hrvatska
- Dr Viviana Langher, professore associato  
Università Sapienza di Roma – Facoltà di  
Medicina e Psicologia, Roma, Italia
- Dr Jan Šiška, profesor  
Univerzita Karlova – Pedagogická fakulta,  
Praha, Czech Republic

## ORGANIZACIONI ODBOR

- Dr Snežana Nikolić, redovni profesor,  
dekan
- Dr Vesna Žunić Pavlović, redovni profesor,  
prodekan za nauku
- Dr Gordana Odović, redovni profesor,  
prodekan za nastavu
- Dr Ksenija Stanimirov, docent
- Dr Predrag Teovanović, docent
- Dr Ivana Sretenović, asistent
- Dr Ivana Veselinović, asistent
- Nevena Ječmenica, asistent
- Marija Nešić, asistent
- Aleksandra Pantović, asistent

Univerzitet u Beogradu – Fakultet za  
specijalnu edukaciju i rehabilitaciju, Beograd,  
Srbija

## SCIENTIFIC COMMITTEE

### **PRESIDENT OF THE SCIENTIFIC COMMITTEE:**

Snežana Nikolić, Ph.D., professor, Dean  
University of Belgrade – Faculty of Special  
Education and Rehabilitation, Belgrade,  
Serbia

### **MEMBERS OF THE SCIENTIFIC COMMITTEE from the University of Belgrade – Faculty of Special Education and Rehabilitation:**

- Vesna Žunić Pavlović, Ph.D., professor, Vice Dean for Science
- Gordana Odović, Ph.D., professor, Vice Dean for Teaching Activities
- Danijela Ilić Stošović, Ph.D., professor
- Branislava Popović Čitić, Ph.D., professor
- Vesna Vučinić, Ph.D., associate professor
- Sanja Dimoski, Ph.D., associate professor
- Bojan Dučić, Ph.D., assistant professor
- Marija Jelić, Ph.D., assistant professor
- Tamara Kovačević, Ph.D., assistant professor

### **MEMBERS OF THE SCIENTIFIC COMMITTEE from abroad:**

- Dmitriev Aleksey Andreevich, Ph.D., professor, Dean  
Moscow Region State University – Faculty of Special Pedagogy and Psychology, Moscow, Russia
- Milan Kulić, Ph.D., professor, Dean  
University of East Sarajevo – Faculty of Medicine Foča, Foča, Republic of Srpska, Bosnia and Herzegovina
- Mitja Krajncan, Ph.D., professor, Vice Dean for Quality and Development  
University of Primorska – Faculty of Education, Koper, Slovenia
- Zora Jačova, Ph.D., professor  
Ss. Cyril and Methodius University – Faculty of Philosophy, Skopje, North Macedonia
- Ante Bilić-Prčić, Ph.D., associate professor  
University of Zagreb – Faculty of Education and Rehabilitation Sciences, Zagreb, Croatia
- Viviana Langher, Ph.D., associate professor  
Sapienza University of Rome – Faculty of Medicine and Psychology, Rome, Italy
- Jan Šiška, Ph.D., associate professor  
Charles University – Faculty of Education, Praha, Czech Republic

## ORGANIZING COMMITTEE

- Snežana Nikolić, Ph.D., professor, Dean
- Vesna Žunić Pavlović, Ph.D., professor, Vice Dean for Science
- Gordana Odović, Ph.D., professor, Vice Dean for Teaching Activities
- Ksenija Stanimirov, Ph.D., assistant professor
- Predrag Teovanović, Ph.D., assistant professor
- Ivana Sretenović, Ph.D., assistant
- Ivana Veselinović, Ph.D., assistant
- Nevena Ječmenica, assistant
- Marija Nešić, assistant
- Aleksandra Pantović, assistant

University of Belgrade – Faculty of Special  
Education and Rehabilitation, Belgrade, Serbia

## SADRŽAJ

OPŠTE TEME	
GENERAL TOPICS	
	17
INTERRELATION BETWEEN PRESCHOOLERS' FEARS AND PARENTAL FEARS	18
ВЗАИМОСВЯЗЬ СТРАХОВ ДОШКОЛЬНИКОВ С РОДИТЕЛЬСКИМИ СТРАХАМИ	19
<i>Alexey Andreevich Dmitriev, Victoria Gennadyevna Kolyagina</i>	
LITERATURE FOR CHILDREN WITH SPECIAL NEEDS IN PRESCHOOL	20
<i>Aksinja Kermauner</i>	
PRESCHOOL CHILDREN'S ATTITUDES TOWARD THEIR PEERS WITH SPECIAL NEEDS	21
<i>Suzana Pulec Lah, Mojca Paradiž, Alenka Polak</i>	
EARLY COMMUNICATION SKILLS OF PRESCHOOL CHILDREN	22
<i>Jerneja Novšak Brce, Damjana Kogovšek</i>	
VERBALNI I NEVERBALNI ASPEKTI EGZEKUTIVNIH FUNKCIJA KOD DECE MLAĐEG ŠKOLSKOG UZRASTA	23
VERBAL AND NONVERBAL ASPECTS OF EXECUTIVE FUNCTIONS IN YOUNG SCHOOL-AGED CHILDREN	24
<i>Nataša Buha, Milica Gligorović</i>	
UNAPREĐIVANJE VRŠNJAČKIH ODNOSA KROZ POZITIVNO VRŠNJAČKO IZVEŠTAVANJE	25
IMPROVEMENT OF PEER RELATIONSHIPS THROUGH POSITIVE PEER REPORTING	26
<i>Slobodan Banković, Branislav Brojčin</i>	
CRTEŽ KAO SREDSTVO ZA DIJAGNOZU I TRETMAN OSOBA SA SMETNJAMA U RAZVOJU	27
DRAWING AS A MEANS OF DIAGNOSIS AND TREATMENT OF INDIVIDUALS WITH DEVELOPMENTAL DISORDERS	28
<i>Lucija Đorđević, Srboljub Đorđević</i>	
ROUTINE BASED MODEL – COMPREHENSIVE WAY TO SUPPORT CHILDREN WITH DISABILITY AND THEIR FAMILIES	29
<i>Natalia Józefacka, Sylwia Wrona, Lucyna Legierska</i>	
KOLABORATIVNI ODNOS RODITELJA I PROFESIONALACA KAO OSNOV EFIKASNOSTI INTERVENCIJA U RANOM DETINJSTVU	30
COLLABORATIVE RELATIONSHIP BETWEEN PARENTS AND PROFESSIONALS AS AN ESSENTIAL OF EFFICACY IN EARLY CHILDHOOD INTERVENTION PRACTICE	31
<i>Snežana Ilić, Mirjana Đorđević, Špela Golubović</i>	
INKLUZIJA KROZ PROJEKTNU NASTAVU OSNOVNE ŠKOLE „MLADOST“ NOVI BEOGRAD	32
INCLUSION THROUGH PROJECT BASED TEACHING IN ELEMENTARY SCHOOL “MLADOST” NOVI BEOGRAD	33
<i>Vesna Jocić, Milan Tešić, Marta Anđelić, Jovana Vasić</i>	

PSIHOSOCIJALNA PODRŠKA ADEKVATNOM RAZVOJU AFEKTIVNE VEZANOSTI KOD DECE KOJA ODRASTAJU U INSTITUCIJAMA	34
PSYCHOSOCIAL SUPPORT OF ADEQUATE ATTACHMENT DEVELOPMENT IN CHILDREN REARED IN INSTITUTIONS	35
<i>Irena Stojković, Marija Jelić</i>	
TRANZICIONO PLANIRANJE ZA UČENIKE SA SMETNJAMA U RAZVOJU	36
TRANSITION PLANNING FOR STUDENTS WITH DISABILITIES	37
<i>Gordana Odović, Biljana Milanović Dobrota</i>	
ANALIZA POSTOJEĆIH MERA PODRŠKE ZA STUDENTE SA INVALIDITETOM NA UNIVERZITETU U BEOGRADU	38
EDUCATIONAL SUPPORT SYSTEMS FOR STUDENTS WITH DISABILITIES AT UNIVERSITY OF BELGRADE	39
<i>Jasmina Karić, Mirela Avdagić</i>	
SAMOREGULACIJA I ZADOVOLJSTVO AKADEMSKOM PODRŠKOM KOD STUDENATA SA INVALIDITETOM	40
SELF-REGULATION AND SATISFACTION WITH ACADEMIC SUPPORT IN STUDENTS WITH DISABILITY	41
<i>Vesna Vučinić, Dragana Stanimirović, Marija Anđelković, Milica Filajdić</i>	
SINDROM PROFESIONALNOG SAGOREVANJA KOD DEFEKTOLOGA I NASTAVNIKA ZAPOSLENIH U OBRAZOVNIM USTANOVAMA	42
BURNOUT SYNDROM AMONG SPECIAL AND REGULAR EDUCATION TEACHERS WORKING IN EDUCATIONAL INSTITUTIONS	43
<i>Aleksandra Pantović, Dragana Maćešić Petrović, Ružica Zdravković</i>	
IZLOŽENOST NASTAVNIKA NASILNOM PONAŠANJU UČENIKA U SREDNJIM ŠKOLAMA ZA UČENIKE SA SMETNJAMA U RAZVOJU	44
TEACHERS' EXPOSURE TO VIOLENT BEHAVIOR OF STUDENTS IN SECONDARY SCHOOLS FOR STUDENTS WITH DISABILITIES	45
<i>Vesna Žunić Pavlović, Miroslav Pavlović, Svetlana Kaljača, Nenad Glumbić</i>	

## MOTORIČKI POREMEĆAJI

### MOTOR DISORDERS

46

POVEZANOST IZMEĐU MOTORIČKIH SPOSOBNOSTI I FIZIČKE AKTIVNOSTI KOD DECE SA SMETNJAMA U RAZVOJU	47
THE RELATIONSHIP BETWEEN MOTOR ABILITIES AND PHYSICAL ACTIVITIES IN CHILDREN WITH DISABILITIES	48
<i>Ivana Sretenović, Goran Nedović, Dragan Rapačić</i>	
FONOLOŠKE KARAKTERISTIKE MATERNJEG I STRANOG JEZIKA KOD DECE SA RAZVOJNIM POREMEĆAJEM KOORDINACIJE	49
PHONOLOGICAL CHARACTERISTICS OF MOTHER AND FOREIGN LANGUAGE IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER	50
<i>Jovana Janjić, Snežana Nikolić, Danijela Ilić Stošović</i>	



KINESTETIČKA SENZITIVNOST KAO DETERMINANTA ČITLJIVOSTI RUKOPISA UČENIKA SA I BEZ TEŠKOĆA U PISANJU	51
KINESTHETIC SENSITIVITY AS A DETERMINANT OF WRITING LEGIBILITY IN STUDENTS WITH AND WITHOUT WRITING DIFFICULTIES	52
<i>Marina Vujanović, Danijela Ilić Stošović</i>	
MOTORIČKO FUNKCIONISANJE KAO INDIKATOR NUMERIČKIH SPOSOBNOSTI	53
MOTOR FUNCTIONING AS AN INDICATOR OF NUMERICAL ABILITIES	54
<i>Snežana Nišević, Snežana Nikolić</i>	
GENSKA DIJAGNOZA KOD DIŠENOVE I BEKEROVE MIŠIĆNE DISTROFIJE I DETEKCIJA PRENOSIOCA	55
GENE DIAGNOSIS OF DUCHENNE AND BECKER MUSCULAR DYSTROPHY AND CARRIER DETECTION	56
<i>Jasmina Maksić, Ivana Novaković, Dragan Rapačić, Mirjana Mitrović</i>	
WII FIT VIRTUELNI PROGRAM TRENINGA U POBOLJŠANJU KONTROLE RAVNOTEŽE TELA DETETA SA DAUNOVIM SINDROMOM – STUDIJA SLUČAJA	57
WII FIT VIRTUAL EXERCISE PROGRAMME FOR IMPROVING BODY BALANCE CONTROL IN CHILDREN WITH DOWN SYNDROME – A CASE STUDY	58
<i>Milosav Adamović, Miodrag Stošljević, Vojislav Todorović</i>	
SOMATOSENZORNA STIMULACIJA PRIMENOM UV BOX-A U RADU SA UČENICIMA SA CEREBRALNOM PARALIZOM	59
SOMATOSENSORY STIMULATION USING UV BOX IN WORKING WITH STUDENTS WITH CEREBRAL PALSY	60
<i>Sanja Denić, Marina Vujanović, Mina Bogdanović Lišančić</i>	
<b>POREMEĆAJI GOVORA, JEZIKA I KOMUNIKACIJE</b>	
<b>SPEECH, LANGUAGE AND COMMUNICATION DISORDERS</b>	<b>61</b>
LEKSIČKA OBRADA IMENICA, GLAGOLA I PRIDEVA KOD DECE SA SPECIFIČNIM JEZIČKIM POREMEĆAJEM	62
LEXICAL PROCESSING OF NOUNS, VERBS AND ADJECTIVES IN CHILDREN WITH SPECIFIC LANGUAGE IMPAIRMENT	63
<i>Bojana Drljan, Mile Vuković</i>	
FONOLOŠKA SVESNOST KOD DECE SA NEPRAVILNIM IZGOVOROM GLASOVA	64
PHONOLOGICAL AWARENESS IN CHILDREN WITH IRREGULAR PRONUNCIATION OF PHONEMES	65
<i>Slavica Golubović, Nevena Radivojević, Nevena Ječmenica</i>	
METALINGVISTIČKA SVESNOST DECE SA SMETNJAMA U ČITANJU	66
METALINGUISTIC AWARENESS OF CHILDREN WITH READING DISORDERS	67
<i>Gordana Čolić</i>	
LATERALIZOVANOST I BIOELEKTRIČNA AKTIVNOST MOZGA KAO MOGUĆI POKAZATELJI MUCANJA KOD DECE	68
LATERALITY AND BIOELECTRIC BRAIN ACTIVITY AS POSSIBLE INDICATORS OF STUTTERING IN CHILDREN	69
<i>Jadranka Otašević</i>	

CORRELATION BETWEEN JOINT ATTENTION AND LANGUAGE DEVELOPMENT BEFORE AND AFTER VOCABULARY SUPPORT	70
<i>Monika Rosandić, Sanja Šimleša, Jasmina Ivšac Pavliša</i>	
KVALITET KOMUNIKACIJE OSOBA SA SPASTIČNOM DIZARTRIJOM	71
QUALITY OF COMMUNICATION IN PEOPLE WITH A SPASTIC DYSARTHRIA	72
<i>Nadica Jovanović Simić, Ivana Arsenić, Bojana Drljan, Tanja Milovanović</i>	
PRISUSTVO TREMORA U GLASU ODRASLIH OSOBA SA HIPOKINETIČKOM DIZARTRIJOM	73
PRESENCE OF VOICE TREMOR IN ADULTS WITH HYPOKINETIC DYSARTHRIA	74
<i>Ivana Arsenić, Nadica Jovanović Simić, Mirjana Petrović Lazić, Ivana Šehović</i>	
KVALITET ŽIVOTA OSOBA SA NEFLUENTNIM AFAZIJAMA	75
QUALITY OF LIFE OF PERSONS WITH NONFLUENT APHASIA	76
<i>Željana Sukur, Mile Vuković</i>	
SPEKTROGRAFSKA ANALIZA VOKALA KOD LARINGEKTOMIRANIH BOLESNIKA	77
SPECTROGRAPHIC ANALYSIS OF VOWELS IN LARYNGECTOMY PATIENTS	78
<i>Mirjana Petrović Lazić, Ivana Šehović</i>	
SPOSOBNOST ZA RAZUMEVANJE IDIOMA KOD STARIH OSOBA	79
IDIOM UNDERSTANDING IN OLDER ADULTS	80
<i>Maja Ivanović</i>	
ETIOPATOGENETSKI ASPEKTI ALERGIJSKOG FUNGALNOG RINOSINUZITISA	81
ETHIOPATHOGENETIC ASPECTS OF ALLERGIC FUNGAL RHINOSINUSITIS	82
<i>Vladan Milutinović, Snežana Babac</i>	
KOMPARATIVNA ANALIZA POREMEĆAJA ČITANJA KOD OSOBA SA BROKINOM I SUPKORTIKALNOM MOTORNOM AFAZIJOM	83
COMPARATIVE ANALYSIS OF READING DISORDERS IN PEOPLE WITH BROCA'S AND SUBCORTICAL MOTOR APHASIA	84
<i>Tanja Milovanović, Aleksandra Vidaković, Ljubica Konstantinović</i>	
<b>POREMEĆAJI U MENTALNOM RAZVOJU</b>	<b>85</b>
<b>MENTAL DISORDERS</b>	
FEATURES OF SHORT-TERM (PSYCHOPHYSIOLOGICAL) READINESS FOR WORKING WITH CHILDREN WITH DISABILITIES IN PSYCHOLOGISTS WORKING WITH CHILDREN WITH TYPICAL DEVELOPMENT	86
ОСОБЕННОСТИ КРАТКОВРЕМЕННОЙ (ПСИХОФИЗИОЛОГИЧЕСКОЙ) ГОТОВНОСТИ К РАБОТЕ С ДЕТЬМИ-ИНВАЛИДАМИ У ПСИХОЛОГОВ, РАБОТАЮЩИХ С ДЕТЬМИ С НОРМАЛЬНЫМ РАЗВИТИЕМ	87
<i>Svetlana Stanislavovna Betanova, Victoria Gennadyevna Kolyagina</i>	
SCREENING TOOL FOR CHILDREN WITH INTELLECTUAL DISABILITY	89
<i>Wasim Ahmad, Bir Singh Chavan</i>	

STUDYING AND EVALUATING EMOTIONAL PERSONAL TRENDS AND BEHAVIORAL REPERTOIRE OF EMOTIONAL RESPONSE OF YOUNGER STUDENTS WITH INTELLECTUAL DISABILITY	90
<i>Natalia Yuryevna Verkhoturova, Alexey Andreevich Dmitriev</i>	
CHALLENGES OF DEVELOPING READING LITERACY OF STUDENTS WITH MILD INTELLECTUAL DISABILITIES	91
<i>Nika Jenko, Mojca Lipec Stopar</i>	
CHARACTERISTICS OF REPETITIVE AND RESTRICTIVE BEHAVIORS IN CHILDREN WITH AUTISM SPECTRUM DISORDER AND TYPICALLY DEVELOPING CHILDREN	92
<i>Sana Čačko, Ivona Mršić</i>	
TOPOGRAFIJA SAMOPOVREĐIVANJA KOD DECE SA POREMEĆAJEM AUTISTIČKOG SPEKTRA I DECE SA INTELKTUALNOM OMETENOŠĆU	93
TOPOGRAPHY OF SELF-INJURY IN CHILDREN WITH AUTISM SPECTRUM DISORDER AND CHILDREN WITH INTELLECTUAL DISABILITY	94
<i>Danijel Marković</i>	
NEVERBALNO PLANIRANJE I CRTEŽ KOD DECE S LAKOM INTELKTUALNOM OMETENOŠĆU	95
NONVERBAL PLANNING AND DRAWING IN CHILDREN WITH MILD INTELLECTUAL DISABILITY	96
<i>Milica Gligorović, Nataša Buha</i>	
IGRA I UČENJE KROZ IGRU KOD DECE SA RAZVOJNIM SMETNJAMA	97
PLAY AND LEARNING THROUGH PLAY AMONG CHILDREN WITH DEVELOPMENTAL DISABILITIES	98
<i>Ružica Zdravković, Aleksandra Pantović</i>	
DETERMINANTE SOCIOMETRIJSKOG STATUSA SREDNJOŠKOLACA SA INTELKTUALNOM OMETENOŠĆU	99
DETERMINANTS OF THE SOCIOMETRIC STATUS OF SECONDARY SCHOOL STUDENTS WITH INTELLECTUAL DISABILITIES	100
<i>Bojan Dučić, Svetlana Kaljača</i>	
PRIMENA HORTIKULTURNIH INTERVENCIJA KOD OSOBA SA OMETENOŠĆU	101
APPLICATION OF HORTICULTURAL INTERVENTIONS IN PERSONS WITH DISABILITIES	102
<i>Biljana Milanović Dobrota, Gordana Odović</i>	
PRIPREMA OSOBA SA POREMEĆAJEM IZ SPEKTRA AUTIZMA ZA MEDICINSKE INTERVENCIJE	103
PREPARING PEOPLE WITH AUTISM SPECTRUM DISORDER FOR MEDICAL PROCEDURES	104
<i>Nenad Glumbić</i>	
PROBLEMI I KVALITET ŽIVOTA PORODICA SA DJECOM SA SMETNJAMA IZ SPEKTRA AUTIZMA U CRNOJ GORI	105
PROBLEMS AND QUALITY OF LIFE FOR FAMILIES WITH CHILDREN AFFECTED BY SPECTRUM OF AUTISM IN MONTENEGRO	106
<i>Ljiljana Jovanović, Jovana Romandić</i>	

RODITELJSKI LOKUS KONTROLE I NJEGOVA POVEZANOST SA SOCIO-DEMOGRAFSKIM VARIJABLAMA KOD MAJKI DECE SA MOTORIČKIM POREMEĆAJIMA I DECE SA INTELKTUALNOM OMETENOŠĆU	107
PARENTAL LOCUS OF CONTROL AND ITS RELATIONSHIP WITH SOCIO-DEMOGRAPHIC VARIABLES IN MOTHERS OF CHILDREN WITH MOTOR DISABILITIES AND CHILDREN WITH INTELLECTUAL DISABILITY	108
<i>Jovana Tomić, Ivona Milačić Vidojević</i>	
RAZLIKE U STRATEGIJAMA PREVLAĐAVANJA STRESA KOD RODITELJA DECE S POREMEĆAJEM AUTISTIČKOG SPEKTRA I DECE TIPIČNOG RAZVOJA	109
DIFFERENCES IN COPING STRATEGIES OF PARENTS OF CHILDREN WITH AUTISM SPECTRUM DISORDER AND PARENTS OF TYPICALLY DEVELOPING CHILDREN	110
<i>Mia Čarakovac, Ivona Milačić Vidojević</i>	
<b>POREMEĆAJI U PONAŠANJU</b>	
<b>BEHAVIORAL DISORDERS</b>	<b>111</b>
TRANSFORMACIJA VASPITNIH INSTITUCIJA U PROFESIONALNI CENTAR	112
FROM RESIDENTIAL CARE INSTITUTION TO PROFESSIONAL CENTER	113
<i>Mitja Krajnčan</i>	
ASSUMPTIONS THAT INFLUENCE THE IMPLEMENTATION OF PARTICIPATION IN RESIDENTIAL TREATMENT	114
<i>Mateja Marovič, Ana Bogdan Zupančič</i>	
DISCUSSING THE SOCIAL, COMMUNAL AS AN OPPORTUNITY FOR SOCIAL PEDAGOGY	115
<i>Ana Bogdan Zupančič, Mateja Marovič</i>	
MONITORING AND EVALUATION OF EXPERT CENTER MARIBOR	116
<i>Matej Vukovič, Mitja Krajnčan, Friedhelm Peters</i>	
MOGUĆNOSTI UNAPREĐENJA REZILIJENTNOSTI DECE BEZ RODITELJSKOG STARANJA NA REZIDENCIJALNOM SMEŠTAJU	117
OPPORTUNITIES FOR ENHANCING THE RESILIENCE OF CHILDREN WITHOUT PARENTAL CARE IN RESIDENTIAL CARE	118
<i>Marija Nešić, Branislava Popović Čitić</i>	
POLNE I UZRASNE SPECIFIČNOSTI SLIKE O SEBI ADOLESCENATA NA SMEŠTAJU U USTANOVAMA SOCIJALNE ZAŠTITE	119
SEX AND AGE SPECIFICS OF SELF-IMAGE OF ADOLESCENTS FROM RESIDENTIAL CARE FACILITIES	120
<i>Marija Stojanović, Vesna Žunić Pavlović</i>	
ZAŠTITA DECE ŽRTAVA I SVEDOKA U KRIVIČNOM POSTUPKU	121
PROTECTION OF CHILD VICTIMS AND WITNESSES IN CRIMINAL PROCEEDINGS	122
<i>Ivana Milosavljević Đukić</i>	

RESTORATIVNA PRAVDA I REAKCIJA NA MALOLETNIČKU DELINKVENCIJU – UPOREDNOPRAVNA ISKUSTVA	123
RESTORATIVE JUSTICE AND JUVENILE DELINQUENCY – COMPARATIVE LAW REVIEW	124
<i>Milica Kovačević</i>	
ZATVOR IZMEĐU UTOPIJE I DISTOPIJE	125
PRISON BETWEEN UTOPIA AND DYSTOPIA	126
<i>Goran Jovanić, Vera Petrović</i>	
POVEZANOST NIVOA EMPATIJE I UČESTALOSTI RECIDIVA KOD OSUĐENIH LICA	127
INTERCONNECTION BETWEEN LEVEL OF EMPATHY AND RECIDIVISM FREQUENCY IN CONVICTS	128
<i>Mirjana Vidaković</i>	
SOCIOMETRIJA KAO DIJAGNOSTIČKA I TERAPIJSKA METODA U PREVAZILAŽENJU OTPORA U GRUPI LEČENIH ALKOHOLIČARA	129
SOCIOMETRY AS A DIAGNOSTIC AND THERAPY METHOD IN PREVAILING OUTPUT IN A LABOR ALCOHOLIC GROUP	130
<i>Marija Maljković, Danica Bošković Đukić</i>	
PROCENA NEGATIVNIH POSLEDICA RAZVODA NA MALOLETNU DECU I MOGUĆE INTERVENCIJE	131
ASSESSMENT OF DIVORCE-RELATED NEGATIVE ISSUES ON MINOR CHILDREN AND POSSIBLE INTERVENTIONS	132
<i>Danka Radulović, Natalija Ignjatović</i>	
POVEZANOST PORODIČNE STRUKTURE SA INTERNALIZOVANIM I EKSTERNALIZOVANIM PROBLEMIMA ADOLESCENATA	133
THE RELATIONSHIP BETWEEN FAMILY STRUCTURE AND INTERNALISING AND EXTERNALIZING PROBLEMS IN ADOLESCENTS	134
<i>Dragica Bogetić</i>	
CHARACTERISTICS OF GAMBLING ACTIVITIES AND MOTIVATION FOR GAMBLING OF HIGH SCHOOL STUDENTS FROM ZIVINICE	135
<i>Meliha Bijedić, Lejla Kuralić Čišić, Adela Čokić</i>	
POGREŠNO PERCIPIRANA UPOTREBA ALKOHOLA I ILEGALNIH PSIHOAKTIVNIH SUPSTANCI KOD VRŠNJAKA KAO FAKTOR RIZIKA	136
MISPERCEPTION OF ALCOHOL AND ILLICIT DRUG USE IN PEERS AS A RISK FACTOR	137
<i>Milica Matović</i>	
SAMOPOŠTOVANJE ADOLESCENATA SA TEŠKOĆAMA U EMOCIONALNOM I SOCIJALNOM RAZVOJU	138
SELF-ESTEEM OF ADOLESCENTS WITH DIFFICULTIES IN EMOTIONAL AND SOCIAL DEVELOPMENT	139
<i>Branislava Popović Ćitić, Lidija Bukvić, Vesna Dukanac</i>	

NASTAVNICI KAO ŽRTVE NASILJA UČENIKA	140
TEACHERS AS VICTIMS OF STUDENT VIOLENCE	141
<i>Danica Vasiljević Prodanović</i>	

## SMETNJE I POREMEĆAJI SLUHA

### HEARING IMPAIRMENTS

142

COMPARISON OF COGNITIVE ABILITY OF FIRST- AND SECOND-GENERATION DEAF CHILDREN WITH COCHLEAR IMPLANTS	143
<i>Kourosh Amraei, Leila Fathi, Mohammadparsa Azizi, AliHemat Mahmoudneghad</i>	
SLUŠNI UZRAST KAO FAKTOR RAZVOJA LINGVISTIČKIH VEŠTINA KOD DECE KORISNIKA KOHLEARNOG IMPLANTA I SLUŠNIH APARATA	144
HEARING AGE AS A FACTOR OF LINGUISTIC SKILLS DEVELOPMENT IN CHILDREN USING COCHLEAR IMPLANT OR HEARING AIDS	145
<i>Sanja Ostojić Zeljković, Mina Nikolić</i>	
UTICAJ HABILITACIJE NA POČETNI NIVO GOVORNOG RAZVOJA GLUVE I NAGLUVE DECE	146
THE IMPACT OF HABILITATION ON EARLY SPEECH DEVELOPMENT ACHIEVEMENT IN DEAF AND HARD OF HEARING CHILDREN	147
<i>Mina Nikolić, Sanja Ostojić Zeljković</i>	
BIMODALNI BILINGVIZAM GLUVE I NAGLUVE DECE PREDŠKOLSKOG UZRASTA	148
BIMODAL BILINGUALISM IN DEAF AND HARD OF HEARING CHILDREN OF PRESCHOOL AGE	149
<i>Tamara Kovačević, Sanja Đoković</i>	
UPOTREBA PRAVIH PRIDEVA KOD GLUVE I NAGLUVE DECE	150
THE USE OF DESCRIPTIVE ADJECTIVES IN PARTIALLY AND COMPLETELY DEAF CHILDREN	151
<i>Ivana Veselinović, Svetlana Slavnić, Ljiljana Jeličić</i>	
UPOTREBA REČI SUPROTNOG ZNAČENJA U PISANOM I ZNAKOVNOM JEZIKU	152
THE USE OF WORDS OF THE OPPOSITE MEANING IN WRITTEN AND SIGN LANGUAGE	153
<i>Ljubica Isaković, Mia Šešum, Nadežda Dimić</i>	
PERCEPCIJA KVALITETA ODELJENJSKE KLIME U ODNOSU NA ŠKOLSKI USPEH GLUVIH I NAGLUVIH UČENIKA	154
RELATIONS BETWEEN PERCEIVING THE QUALITY OF CLASSROOM CLIMATE AND ACADEMIC ACHIEVEMENT OF DEAF AND HARD OF HEARING STUDENTS	155
<i>Vesna Radovanović, Jasmina Kovačević, Jasmina Karić</i>	
ZASTUPLJENOST INOVATIVNIH MODELA NASTAVE U OBRAZOVANJU GLUVIH I NAGLUVIH UČENIKA	156
THE FREQUENCY OF INNOVATIVE MODELS IN EDUCATION OF DEAF AND HARD OF HEARING PUPILS	157
<i>Jasmina Kovačević, Vesna Radovanović, Dragana Maćešić Petrović</i>	

SAMOPOŠTOVANJE I ULOGA SPORTA KOD GLUVIH I NAGLUVIH	158
SELF-ESTEEM AND ROLE OF SPORT AND FITNESSES IN DEAF INDIVIDUALS	159
<i>Ljiljana Jovčić, Tijana Palibrk, Iva Milićević</i>	
OŠTEĆENJE SLUHA IZAZVANO STARENJEM – PREZBIAKUZIJA	160
HEARING LOSS CAUSED BY AGING – PRESBYACUSIS	161
<i>Sanja Đoković, Tamara Kovačević</i>	
QUALITY OF LIFE OF PERSONS WITH USHER SYNDROME	162
<i>Ingrid Žolgar, Tinka Ferkolj, Damjana Kogovšek</i>	
TINITUS – ETIOPATOGENETSKI FAKTORI I MOGUĆNOST LEČENJA	163
TINNITUS – ETIOPATHOGENIC FACTORS AND POSSIBILITY OF TREATMENT	164
<i>Snežana Babac, Vladan Milutinović</i>	
<b>SMETNJE I POREMEĆAJI VIDA</b>	
<b>VISUAL IMPAIRMENTS</b>	<b>165</b>
THE ROLE OF CENTER IRIS FOR THE BLIND AND PARTIALLY SIGHTED IN THE PROCESS OF ESTABLISHING INCLUSIVE ENVIRONMENT IN SLOVENIA	166
<i>Katjuša Koprivnikar</i>	
EVOLUCIJA RANE INTERVENCIJE U CENTRU IRIS: IZAZOVI, PRISTUPI I OPTIMALNE STRATEGIJE	167
EVOLUTION OF EARLY INTERVENTION PRACTICE IN CENTER IRIS: CHALLENGES, APPROACHES AND OPTIMAL STRATEGIES	168
<i>Dragana Žunič</i>	
SENZIBILIZACIJA VASPITAČA, NASTAVNIKA, STUDENATA I STRUČNIH SARADNIKA ZA RAD SA DECOM OŠTEĆENOG VIDA	169
SENSIBILIZATION OF EDUCATORS, TEACHERS, STUDENTS AND TECHNICAL ASSOCIATES FOR WORKING WITH VISUALLY IMPAIRED CHILDREN	170
<i>Danijela Petković</i>	
EDUKACIJA RODITELJA U OKVIRU PROGRAMA RANE INTERVENCIJE U ŠKOLI ZA UČENIKE OŠTEĆENOG VIDA „VELJKO RAMADANOVIĆ“	171
EDUCATION OF PARENTS WITHIN THE EARLY INTERVENTION PROGRAM IN SCHOOL FOR VISUALLY IMPAIRED PUPILS “VELJKO RAMADANOVIĆ”	172
<i>Zorica Vladisavljević</i>	
THE POSITION OF BLIND AND PARTIALLY SIGHTED CHILDREN IN THEIR PEER GROUP	173
<i>Mateja Maljevac</i>	
UTICAJ RODITELJA NA SOCIJALNI RAZVOJ DJECE OŠTEĆENOG VIDA	174
THE INFLUENCE OF PARENTS ON THE SOCIAL DEVELOPMENT OF CHILDREN WITH VISUAL IMPAIRMENT	175
<i>Ivana Zečević, Bojana Mastilo</i>	

WAYS TO ENABLE EQUAL PARTICIPATION OF THE BLIND AND PARTIALLY SIGHTED PUPILS AT KNOWLEDGE COMPETITIONS IN SLOVENIA	176
<i>Marija Repe Kocman</i>	
SAMOPROCENA BARIJERA ZA UPRAŽNJAVANJE FIZIČKIH AKTIVNOSTI OSOBA SA OŠTEĆENJEM VIDA	177
SELF-ASSESSMENT OF PHYSICAL ACTIVITY BARRIERS OF PERSONS WITH VISUAL IMPAIRMENT	178
<i>Ksenija Stanimirov, Aleksandra Grbović</i>	
INDEKS AUTORA	
AUTHOR INDEX	179



OPŠTE TEME  
GENERAL TOPICS

---

## INTERRELATION BETWEEN PRESCHOOLERS' FEARS AND PARENTAL FEARS

Alexey Andreevich Dmitriev\*\*, Victoria Gennadyevna Kolyagina

Moscow Region State University – Faculty of Special Pedagogy and Psychology, Moscow, Russia

The article presents a study of the fears of preschool children and their parents, conducted as a comparative analysis of the degree of their relationship and severity. The purpose of the study is to identify and study the characteristics of fear in preschoolers. The objectives were to clarify the influence of the emotional state of the mother on the child's mental development, to identify the cause of fear in preschoolers, and to analyze the relationship between childhood and maternal fears. The following psychodiagnostic methods were used: a modified questionnaire "Fears in the houses" Zakharov (2007); questionnaire for parents "Fears and fears of adults and their children". Experimental data characterizing the features of the fears of older preschoolers were obtained and systematized. The fears of mothers in childhood and adolescence were analyzed, and their relationship with the fears of children was studied. The sample included 154 preschoolers, 5-7 years of age, and their mothers. The experiment involved children attending preschool educational institutions and the center of speech pathology and neurorehabilitation in Moscow. Comparative analysis confirmed by mathematical statistics showed that the presence of fears in parents affected the emotional state of children. The relationship between the child's fear level and the parents was statistically justified. The description of the distinguished dominant fears of children and mothers, as well as their specific features, is given.

*Key words: fears of preschool children, relationship of child and parental fears, dominant fears of mothers*

---

\*\* aa.dmitriev@mgou.ru

## ВЗАИМОСВЯЗЬ СТРАХОВ ДОШКОЛЬНИКОВ С РОДИТЕЛЬСКИМИ СТРАХАМИ

Алексей Андреевич Дмитриев, Виктория Геннадьевна Колягина

Московский государственный областной университет – Факультет специальной педагогики и психологии, Москва, Россия

В статье представлено исследование страхов дошкольников и их родителей, проведен сравнительный анализ степени их взаимосвязи и выраженности. Целью исследования является выявление и изучение особенностей страхов у дошкольников. Задачами явилось выяснение влияния эмоционального состояния матери на психическое развитие ребенка; выявление причины возникновения страхов у дошкольников и анализ взаимосвязи детских и материнских страхов. В пакет психодиагностических методик вошли: модифицированный опросник „Страхи в домиках“ Захаров (2007); опросник для родителей „Опасения и страхи взрослых и их детей“. Получены и систематизированы экспериментальные данные, характеризующие особенности страхов старших дошкольников. Проанализированы страхи матерей в детстве, отрочестве и их взаимосвязь со страхами детей. Было исследовано 154 дошкольника 5-7 летнего возраста и их матери. В эксперименте участвовали дети, посещающие дошкольные образовательные учреждения и центр патологии и нейрореабилитации речи г. Москва. Сравнительный анализ подтвержденный математической статистикой показал, что наличие страхов у родителей влияет на эмоциональное состояние детей. Статистически обоснована взаимосвязь между уровнем страха ребенка и родителями. Дано описание выделенных доминирующих страхов детей, матерей и их специфические особенности.

*Ключевые слова: страхи дошкольников, взаимосвязь детских и родительских страхов, доминирующие страхи матерей*

## LITERATURE FOR CHILDREN WITH SPECIAL NEEDS IN PRESCHOOL

Aksinja Kermauner\*\*

*University of Primorska – Faculty of Education, Koper, Slovenia*

The Salamanca Statement, which guarantees inclusion into mainstream education for children with special needs, represents a great change for the European education systems. Inclusion flows directly from human rights and from the idea of multi-, interculturality, and plurality. It is a system of interventions through which we try to completely or partly integrate the socially excluded individuals into a wider social environment. If that environment is to change, though, it is necessary to think about adaptation of several factors. One of them is certainly the accessibility of literature for children with special needs. Teachers in mainstream preschools are often confronted with children's special needs and problems with books. In this paper we introduce a multisensory book box that is intended for inclusive "reading" in preschool, so children with special needs can fully participate in the education process and enjoy books despite their disability. We made a book in the box (BOOX). The objects that appear in the original picture book and protagonists in the form of silicone puppets have been stored in a handy box. The child plays with the objects and puppets in the box while adults read the fairy tale. The script and illustrations can be adapted for children with special needs, so they can comprehend them through touch. In addition, smell and sound are also included. The multisensory BOOX is suitable for children with various types of disorders: deaf, blind and partially sighted, children with disorders in mental development, children with attention deficit hyperactivity disorder (ADHD), and also for children without disabilities.

*Key words: preschool, children with special needs, multisensory, book in the box*

---

\*\* aksinja.kermauner@gmail.com

## PRESCHOOL CHILDREN'S ATTITUDES TOWARD THEIR PEERS WITH SPECIAL NEEDS

Suzana Pulec Lah\*\*, Mojca Paradiž, Alenka Polak

*University of Ljubljana – Faculty of Education, Ljubljana, Slovenia*

Preschool education, based on the foundation of social integration and inclusion, should emphasize the importance of shared education of children with special needs and their peers of typical development. To achieve the positive effects of coexistence, the positive inclusive attitudes of the social environment play an important role. In the presentation, we will present the empirical study of preschool children's attitudes towards children with physical impairment, especially from the point of view of all three components of attitudes - cognitive, emotional and behavioral. After a short animated film, presenting socialization of a girl with typical development and a boy with a physical impairment, the interviews were done within the sample of 57 children of typical development, 4 to 5 years of age, in one of the public kindergartens in Slovenia. Apart from preschool children's attitudes towards children with physical impairment, the study also explores children's interpretation and understanding of physical impairment, the perceptions of children with physical impairment and willingness to interact with them. Data was analyzed regarding the frequency of experiences with peers with special needs in kindergarten. The results show that the majority of children involved in the study, no matter how much experience they had with their peers with special needs, understood that physical impairment was not a contagious disease. They consider physical impairment to be curable and not a lifelong condition. The interviewed children of typical development, statistically significantly differ in attitudes towards personal characteristics (social, physical and cognitive) of a child with physical impairment. In the group of children with occasional contacts with children with special needs, the emotional component of attitudes was expressed the most positively. The results lead to the conclusion, that kindergarten educators should carefully consider providing opportunities for positive interactions between children with and without special needs.

*Key words: preschool education, social integration and inclusion, attitudes of preschool children, children with special needs, physical impairment*

---

\*\* [suzana.pulec@pef.uni-lj.si](mailto:suzana.pulec@pef.uni-lj.si)

## EARLY COMMUNICATION SKILLS OF PRESCHOOL CHILDREN

Jerneja Novšak Brce\*\*, Damjana Kogovšek

*University of Ljubljana – Faculty of Education, Ljubljana, Slovenia*

Communication is one of human primary needs, desires, perceptions or knowledge and is divided into verbal and non-verbal communication, which are closely linked during the first years of life, where communication is foundational to a child's healthy development. In early stages of child's life, communication can be intentional or unintentional, can involve conventional or unconventional signals and can take linguistic or non-linguistic forms through spoken language or other modes of communication. For all experts who work with preschool children and also for parents, is important to know the milestones of a child's communication at a certain point, which can be measured and described by using the Communication Matrix. The Communication Matrix is an assessment tool designed to show how someone is communicating with or without speech. It is appropriate for individuals of all ages who are at the earliest stages of communication. The aim of the research was to describe the communication profile of children 1 to 3 years of age, by using the Communication Matrix. Data were gathered on a sample of 25 pre-school children (14 girls, 11 boys) of typical development attending kindergarten. The ability to communicate was measured by pre-school teachers using the Communication Matrix. Results showed that the majority of children achieved age appropriate level of communication. However, statistically significant differences were shown between boys and girls. Girls on average achieve statistically significantly higher results in the area of communication than boys. The Communication Matrix is a useful tool for educators and parents because the results of the Communication Matrix enable them to decide upon general communication goals that are appropriate, given the individual's current skills.

*Key words: communication skills, pre-school children, pre-school teacher, communication matrix*

---

\*\* jerneja.novsak@pef.uni-lj.si

## VERBALNI I NEVERBALNI ASPEKTI EGZEKUTIVNIH FUNKCIJA KOD DECE MLAĐEG ŠKOLSKOG UZRASTA\*

Nataša Buha\*\*, Milica Gligorović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Konstrukt egzekutivnih funkcija (EF) sadrži niz komponenata o čijoj međusobnoj povezanosti, naročito tokom detinjstva, postoje neusaglašeni stavovi. Cilj ovog istraživanja je da se utvrde komponente verbalnih i neverbalnih aspekata EF kod učenika III i IV razreda osnovne škole. Uzorkom je obuhvaćeno 114 dece, oba pola (59/51,8% devojčica), uzrasta 8,7-10,8 godina (AS = 9,80; SD = 0,57). Verbalni aspekti EF procenjeni su primenom: Dodrilove verzije Strup testa, zadacima Raspon rečenica i Raspon brojeva unazad, Testom kontrolisanih usmenih asocijacija i Testom 20 pitanja. Za procenu neverbalnih EF korišćeni su sledeći instrumenti: zadatak Kreni-stani, Izbaci uljeza, Raspon figura unazad, Viskonsin test sortiranja karata i test Londonska kula. Iako između pojedinih varijabli različitih testova/zadataka postoje značajne korelacije, one se kreću u nivou niskih, što ukazuje na diskriminativnu validnost odabranih procedura. Primenom eksplorativne faktorske analize, u domenu verbalnih aspekata EF izdvojene su tri komponente: formiranje strategije (faktorsko zasićenje 0,78), inhibitorna kontrola i radna memorija kao jedinstvena komponenta (faktorsko zasićenje 0,71) i fleksibilnost (faktorsko zasićenje 0,71), koje zajedno objašnjavaju oko 64% ukupne varijanse. U domenu neverbalnih aspekata EF izdvojene su četiri komponente, koje objašnjavaju oko 68% ukupne varijanse: fleksibilnost (faktorsko zasićenje 0,85), inhibitorna kontrola i radna memorija kao jedinstvena komponenta (faktorsko zasićenje 0,66), planiranje (faktorsko zasićenje 0,78) i inicijalna konceptualizacija i održavanje mentalnog seta kao jedinstvena komponenta (faktorsko zasićenje 0,79). Na osnovu rezultata faktorske analize, može se zaključiti da se na posmatranom uzrastu jasno diferenciraju fleksibilnost i sposobnost planiranja, dok su inhibitorna kontrola i radna memorija, koje su na starijim uzrastima relativno nezavisne, grupisane u jedinstven faktor.

*Ključne reči: egzekutivne funkcije, mlađi školski uzrast, inhibitorna kontrola, radna memorija, fleksibilnost*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* natasabuha@fasper.bg.ac.rs

## VERBAL AND NONVERBAL ASPECTS OF EXECUTIVE FUNCTIONS IN YOUNG SCHOOL-AGED CHILDREN\*

Nataša Buha, Milica Gligorović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

The construct of executive functions (EF) contains a number of components whose interrelation involves conflicting views, especially during childhood. The aim of this study was to determine components of verbal and nonverbal aspects of EF in children attending III and IV grade of primary school. The sample consisted of 114 children of both sexes (59/51.8% of girls), aged between 8.8 and 10.8 ( $M = 9.80$ ;  $SD = 0.57$ ). Verbal aspects of EF were assessed by applying the Dodrill' Stroop Test, Listening Span Task and Digit Span Backward, Controlled Oral Word Association Test, and 20 Questions Task. Nonverbal aspects of EF were assessed by applying the Go/No-Go Task, Odd-one-out span and Figure Span Backward, Wisconsin Card Sorting Test, and Tower of London. Although significant relations between the variables of different tests/tasks were determined, these correlations were in the low range, which demonstrates discriminant validity of the selected procedures. Using the Exploratory Factor Analysis, in the domain of verbal aspects of the EF, three components were identified: strategy forming (factor saturation of 0.78), inhibitory control and working memory as a single component (factor saturation of 0.71) and flexibility (factor saturation of 0.71) which all together explain about 64% of the total variance. In the nonverbal EF domain, four components were identified, which explain about 68% of the total variance: (factor saturation of 0.85), inhibitory control and working memory as a single component (factor saturation of 0.66), planning (factor saturation of 0.78), and initial conceptualization and maintenance of the mental set as a unique component (factor saturation of 0.79). Based on the results of factor analysis, it can be concluded that flexibility and planning ability are clearly differentiated at the observed age, while inhibitory control and working memory, which are relatively independent at older ages, are grouped into a single factor.

*Key words: executive functions, young school-aged children, inhibitory control, working memory, flexibility*

---

\* This paper is a result of the project "Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs" (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.



## UNAPREĐIVANJE VRŠNJAČKIH ODNOSA KROZ POZITIVNO VRŠNJAČKO IZVEŠTAVANJE\*

Slobodan Banković\*\*, Branislav Brojčin

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Neuspeh u ostvarivanju adekvatnih vršnjačkih odnosa i prijateljstava, kao i odbačenost od strane vršnjaka, mogu imati dugoročne negativne posledice. Deca sa ometenošću, posebno ona koja ispoljavaju neodgovarajuće socijalno ponašanje, jesu pod rizikom od zauzimanja nižeg sociometrijskog statusa među vršnjacima. Stoga se posebna pažnja pridaje strategijama koje mogu podstaći vršnjačko prihvatanje. Cilj ovog rada jeste prikaz strategije pozitivnog vršnjačkog izveštavanja, kao i efekata njene primene kroz pregled relevantnih istraživanja. Pozitivno vršnjačko izveštavanje je intervencija kojom se menja negativna vršnjačka percepcija socijalno odbačenog ili zanemarenog deteta. Ono unapređuje vršnjačke odnose, a realizuju ga sami vršnjaci. Oni se podučavaju kako da pohvaljuju odabrano dete za odgovarajuće ponašanje, koristeći deskriptivne pohvale. Osim modelovanja adekvatnih i neadekvatnih primera pohvala, koraci obično podrazumevaju gledanje u vršnjaka kojeg hvale, osmehivanje, opisivanje onoga što je dobro uradio ili rekao i pohvaljivanje. Intervencija se realizuje tokom odabranog kratkog perioda u toku dana kada vršnjaci na opisani način pružaju pozitivnu pažnju ciljnom detetu. Nastavnik daje vršnjacima povratnu informaciju, pohvalu i nagradu za pozitivno izveštavanje. U dosadašnjim istraživanjima zabeležen je pozitivan efekat različitih varijanti ove strategije na vršnjačko prihvatanje, porast pozitivnih vršnjačkih interakcija i opadanje problematičnog ponašanja, kao i generalizacija efekata na okruženja u kojima intervencija nije sprovedena. Međutim, ove studije ne daju konačan odgovor kada je u pitanju održavanje uočenih efekata tokom vremena. Relativno jednostavna primena u različitim okruženjima, ekonomičnost, kao i, u okviru pojedinih istraživanja, potvrđena socijalna validnost, čine pozitivno vršnjačko izveštavanje pristupom koji obećava kada je u pitanju pružanje podrške socijalno odbačenoj deci.

*Cljučne reči: pozitivno vršnjačko izveštavanje, socijalna izolacija, vršnjačko prihvatanje*

\* Rad je nastao kao rezultat istraživanja na projektima „Socijalna participacija osoba sa intelektualnom ometenošću“ (br. 179017) i „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* slobodan2008@yahoo.com

## IMPROVEMENT OF PEER RELATIONSHIPS THROUGH POSITIVE PEER REPORTING\*

Slobodan Banković, Branislav Brojčin

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Failure to achieve the adequate peer relationships and friendships, as well as rejection by peers, may have long-term negative consequences. Children with disabilities, especially those who exhibit inappropriate social behavior, are at risk of taking a lower sociometric status among peers. Therefore, special attention is given to strategies that can encourage peer acceptance. The aim of this paper is to present the strategy of positive peer reporting, as well as the effects of its application through a review of relevant research. Positive peer reporting is an intervention that changes the negative peer perception of a socially rejected or neglected child. It promotes peer relationships, and it is realized by peers themselves. They are taught how to praise the chosen child for appropriate behavior, using descriptive praise. Apart from modeling adequate and inadequate examples of praise, steps usually involve looking at a peer who is praising, smiling, describing what he did or said good and praise. The intervention is carried out during the selected short period during the day when the peers in the described way provide positive attention to the target child. The teacher gives peers feedback, praise, and reward for positive reporting. In previous studies, the positive effect of various variants of this strategy on peer acceptance, the increase in positive peer interactions and the reduction of problematic behavior, as well as the generalization of effects on environments in which intervention is not carried out, was observed. However, these studies do not give the ultimate answer when it comes to maintaining observed effects over time. Relatively simple implementation in different environments, economy, as well as, within the framework of individual research, confirmed social validity, make positive peer reporting an approach that promises when it comes to supporting socially rejected children.

*Key words: positive peer reporting, social isolation, peer acceptance*

---

\* This paper is a result of the projects "Social Participation of Persons with Intellectual Disability" (No. 179017) and "Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs" (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## CRTEŽ KAO SREDSTVO ZA DIJAGNOZU I TRETMAN OSOBA SA SMETNJAMA U RAZVOJU

Lucija Đorđević\*\*<sup>a</sup>, Srboljub Đorđević<sup>b</sup>

<sup>a</sup>Škola za osnovno i srednje obrazovanje „Vule Antić“, Vranje, Srbija

<sup>b</sup>Univerzitet u Nišu – Pedagoški fakultet u Vranju, Vranje, Srbija

Dečji likovni rad se može proučavati sa različitih stanovišta. On predstavlja odraz dostignutog nivoa intelektualnih sposobnosti deteta, kao i njegovih sposobnosti za zapažanjem podataka koje svojom rukom može da prikaže. To ukazuje na činjenicu da je dečji likovni razvoj uslovljen detetovim dostignutim nivoom razvoja motorike, svesti i emocija i da se likovno izražavanje ne može javiti pre nego što se steknu potrebni uslovi za njegovo pojavljivanje. Svakako da pored tih unutrašnjih faktora, na samu pojavu i dalji razvoj likovnog izražavanja dece u značajnoj meri utiču i takozvani spoljašnji činioci koji se ogledaju u uslovima života dece i određenim podsticajima koji dolaze iz socijalne sredine. Preko crteža se može pratiti kako deca grade koncept o sebi i svetu oko sebe, a može biti i dokument o zrelosti deteta. Karakteristike crteža, crtanje i razvoj likovnog izražavanja najčešće su izučavane teme kod dece tipičnog razvoja i dece sa teškoćama u učenju, dok je relativno mali broj istraživanja koja su se bavila tim pitanjem kod populacije osoba sa smetnjama u razvoju. Primena crteža je indikovana kod učenika sa smetnjama u učenju, poremećajima u ponašanju i/ili emocionalnim poremećajima, oštećenjem vida, oštećenjem sluha, intelektualnom ometenošću i motoričkim smetnjama. U radu smo razmotrili mogućnosti i potrebu za primenom art terapije u radu sa osobama sa smetnjama u razvoju, sa posebnim osvrtom na upotrebu crteža kao sredstva za dijagnozu i tretman. Na osnovu pregleda nama dostupnih radova može se zaključiti da je relativno mali broj istraživanja koja su se bavila tim problemom kod populacije osoba sa smetnjama u razvoju, a gotovo i da nema istraživačkih radova koji se odnose na primenu crteža u psihoterapiji sa ovom populacijom. Moguće objašnjenje za ovakvo stanje je relativno kratak vremenski period od uspostavljanja art terapije kao posebnog vida psihoterapije, kao i njeno veće korišćenje u praksi, a manje bavljenje empirijskim istraživanjima.

*Ključne reči: crtež, smetnje u razvoju, art terapija*

---

\*\* lusiedjordjevic@yahoo.com

## DRAWING AS A MEANS OF DIAGNOSIS AND TREATMENT OF INDIVIDUALS WITH DEVELOPMENTAL DISORDERS

Lucija Đorđević<sup>a</sup>, Srboljub Đorđević<sup>b</sup>

<sup>a</sup>School for Primary and Secondary Education "Vule Antić", Vranje, Serbia

<sup>b</sup>University of Niš – Teacher-Training Faculty in Vranje, Vranje, Serbia

Children's artwork can be studied from a variety of points of view. It reflects the attained level of intellectual abilities of a child, as well as his/her ability to observe the data that he/she can reproduce by his/her own hand. This points to the fact that children's artistic development is conditioned by the child's reached level of motor development, consciousness and emotion, and that artistic expression cannot occur before the necessary conditions for its occurrence are met. Certainly, in addition to these internal factors, the very appearance and further development of artistic expression of children is significantly influenced by the so-called external factors that are reflected in the conditions of children's lives and certain incentives coming from the social environment. Through drawings, one can observe how children build a concept about themselves and the world around them, and they can also be a document about the maturity of a child. Characteristics of drawings, drawing, and the development of artistic expression are usually studied in children of typical development and children with learning disabilities, while relatively few research studies have dealt with this issue in the population of individuals with disabilities. Application of drawings is indicated in students with learning disabilities, behavioral disorders and/or emotional disorders, visual impairment, hearing impairment, intellectual disability and motor disorders. In this paper we discussed the possibilities and the need for the application of art therapy in working with individuals with disabilities, with special reference to the use of drawings as a means of diagnosis and treatment. Based on the review of papers available to us, it can be concluded that there is a relatively small number of studies that have dealt with this problem in the population of individuals with disabilities, and almost no research papers related to the application of drawings in psychotherapy with this population. A possible explanation for this is a relatively short period of time from the establishment of art therapy as a special type of psychotherapy, as well as its greater use in practice and less engaging in empirical research.

*Key words: drawing, disorders in development, art therapy*

## ROUTINE BASED MODEL – COMPREHENSIVE WAY TO SUPPORT CHILDREN WITH DISABILITY AND THEIR FAMILIES

Natalia Józefacka<sup>\*\*</sup>,<sup>a,c</sup>, Sylwia Wrona<sup>a,b</sup>, Lucyna Legierska<sup>a</sup>

<sup>a</sup>Sloneczna Kraina Preschool, Warsaw, Poland

<sup>b</sup>University of Silesia – Faculty of Education, Cieszyn, Poland

<sup>c</sup>Pedagogical University of Cracow – Faculty of Psychology, Cracow, Poland

The Routines-Based Model is a collection of practices that, together, provide a unified approach to working with young children with disabilities and their families. It emphasizes (a) children's functioning in their everyday routines and (b) supporting families. The model has five components. First, the RBI is the method for determining children's and family's goals. Both the family and the teacher are interviewed, because both home and classroom routines are important for assessing children's functioning and promoting it. Second, incidental teaching is the main method of intervention, with teachers (a) ensuring child engagement, (b) following the child's lead, (c) eliciting higher forms of engagement, and (d) ensuring the interaction was reinforcing. Incidental teaching can be used across routines for all kinds of goals. Third, therapy is integrated into ongoing classroom routines. Therapists and itinerant special instructors work with teachers to build their capacity to intervene with the child throughout every day. Fourth, the zone defense approach is used to ensure, wherever a child is in the classroom, an adult is responsible for ensuring that child's engagement and using incidental teaching with him or her. The zone defense schedule uses the teaching staff efficiently, with each teacher having his or her own column on the schedule. Fifth, we have drawn inspiration from Reggio Emilia to make classrooms beautiful for children and adults alike, to use natural colors and materials, and to organize the environment to promote engagement, social interaction, and creativity. In our presentation we show essence of the model and way of implementation in Poland.

*Key words: Routine Based Model, engagement classroom, inclusive education*

---

<sup>\*\*</sup> nmjozefacka@gmail.com

## KOLABORATIVNI ODNOS RODITELJA I PROFESIONALACA KAO OSNOV EFIKASNOSTI INTERVENCIJA U RANOM DETINJSTVU

Snežana Ilić\*\*<sup>a</sup>, Mirjana Đorđević<sup>a</sup>, Špela Golubović<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Univerzitet u Novom Sadu – Medicinski fakultet, Novi Sad, Srbija

Devedesetih godina dvadesetog veka, razvojem ranih intervencija usmerenih na porodicu u kojima je porodica centar prakse i osnova modela, zasniva se kolaborativni odnos roditelja i profesionalaca. Model usmeren na podršku porodici i detetu po definiciji podrazumeva visoko uvažavanje i poštovanje porodice, kao i pružanje relevantnih informacija porodici na osnovu kojih njeni članovi mogu doneti odluku i napraviti izbor ciljeva i vrste podrške za dete i porodicu i imati aktivno učešće u pružanju istih. Profesionalci koji aktivno učestvuju u podršci su respozivni i fleksibilni u odnosu na zahteve i želje porodice. U radu će biti prikazane osnove saradničkog odnosa profesionalaca i roditelja kroz pristup podrške porodici u intervencijama ranog detinjstva, potkrepljene naučnim dokazima, opisom ključnih elemenata i najefikasnijih modela. Članak je podeljen u dve celine. U prvom delu opisana je transformacija modela i promena paradigme u nastajanju pristupa podrške porodici i detetu sa smetnjama. Drugi deo uključuje opis revidiranog modela koji podrazumeva podržavanje i jačanje porodice, a bazira se na dvadesetogodišnjim istraživanjima i naučenim lekcijama u praktičnoj primeni istog. Istraživanja ukazuju na karakteristike najefikasnijeg odnosa roditelja i profesionalaca u procesu podrške porodicama dece sa smetnjama i identifikuju dve glavne karakteristike: relacionu i participatornu komponentu efikasnog kolaborativnog odnosa. Relaciona komponenta podrazumeva sve karakteristike profesionalca u dobroj kliničkoj praksi (aktivno slušanje, saosećanje, poštovanje, empatičnost), kao i prisustvo pozitivnog stava profesionalaca prema snagama i mogućnostima članova porodice. Participatorna komponenta podrazumeva individualizaciju, fleksibilnost i respozivnost profesionalaca na zabrinutosti i prioritete koje porodica donosi, a koje profesionalci poštuju u osmišljavanju podrške u dostizanju željenih ciljeva i ishoda intervencije.

*Ključne reči: rana intervencija, podrška porodici, kolaborativni pristup*

---

\*\* snezilic@gmail.com

## COLLABORATIVE RELATIONSHIP BETWEEN PARENTS AND PROFESSIONALS AS AN ESSENTIAL OF EFFICACY IN EARLY CHILDHOOD INTERVENTION PRACTICE

Snežana Ilić<sup>a</sup>, Mirjana Đorđević<sup>a</sup>, Špela Golubović<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>University of Novi Sad – Faculty of Medicine, Novi Sad, Serbia

In the 1990s, the developing field of early intervention with young children with disabilities and their families adopted family-centered practice as its philosophical foundation. Family-centered practice includes a key element - a collaborative relationship between parents and professionals. Family-centered practices according to definition treat families with dignity and respect, provide family members with information needed to make informed decisions and choices and actively involve families in obtaining resources and support. Professionals are responsive and flexible to family prioritized goals, outcomes and desires. The article is divided into two sections. The first includes an overview of the originally proposed model to provide a backdrop against which to understand the evolution and transformational features of the model. The second section includes a description of a revised and updated approach to supporting and strengthening families based on more than 20 years of lessons learned from both research and practice. Research indicates the characteristics of the most effective relationship between parents and professionals in the process of supporting families with children with disabilities and identifies two main characteristics: a relational and participatory component of an effective collaborative relationship. Relational component supports all the characteristics of a professional in good clinical practice (active listening, compassion, respect, empathy) as well as the presence of a positive attitude of professionals towards the strengths and abilities of family members. The relational component involves the individualization, flexibility and responsiveness of professionals to the family concerns and priorities and brings them in Individual Family Support Plan.

*Key words: early intervention, family support, collaborative practice*

## INKLUZIJA KROZ PROJEKTNU NASTAVU OSNOVNE ŠKOLE „MLADOST“ NOVI BEOGRAD

Vesna Jocić\*\*, Milan Tešić, Marta Anđelić, Jovana Vasić

Osnovna škola „Mladost“, Beograd, Srbija

U obrazovno-vaspitni sistem u Srbiji je od školske 2018/2019. godine uvedena projektna nastava u cilju podsticanja učenika da znanje stiču kroz faze istraživačkog rada, kao i u cilju osnaživanja njihovih kompetencija za samostalnost u tom procesu. U skladu sa tim, jedan od projekata u Osnovnoj školi „Mladost“ na Novom Beogradu realizovan je od septembra 2018. godine do maja 2019. godine pod nazivom „U tuđim patikama“. Cilj projekta bio je razvijanje svesti učenika o individualnim razlikama, razumevanje teškoća na koje nailaze osobe sa smetnjama u razvoju i jačanje kapaciteta za pružanje podrške istim. Projektom je bilo obuhvaćeno oko 300 učenika od III do VIII razreda. Informacije o ovoj temi prikupljali su putem elektronskih medija, internet i štampanih medija, medija kulture (poseta pozorišnim predstavama i filmskim projekcijama) i putem poseta predavanjima, kao i intervjuisanjem spoljašnjih relevantnih saradnika. Aktivnosti prikupljanja podataka unapred su imale isplanirane nosioce i vreme njihovog odvijanja u zavisnosti od školskog predmeta sa kojim je tom prilikom ostvarena korelacija. Predstavljanje projekta i izvođenje završne aktivnosti učenika realizovano je u vidu okruglog stola na kome su učenici prezentovali pojedinačno svoj rad i iznosili sopstvene zaključke. Tom prilikom, proveru postavljenih ciljeva vrednovana je kroz refleksiju publike i njihovo aktivno učešće u diskusiji. Na osnovu toga, došli smo do zaključka da je dodatna edukacija učenika o inkluzivnom obrazovanju putem samostalnog istraživačkog rada umnogome doprinela proširenju njihovog znanja iz ove oblasti, većoj zainteresovanosti za temu i razumevanje teme, probudilo osećaj empatije i podstaklo ih na dalje istraživanje i pronalaženje načina za adekvatniji i humaniji pristup svojim vršnjacima koji se suočavaju sa različitim razvojnim smetnjama.

*Ključne reči: projektna nastava, inkluzija, osnovna škola*

---

\*\* osmladost-direktor@eunet.rs



## INCLUSION THROUGH PROJECT BASED TEACHING IN ELEMENTARY SCHOOL “MLADOST” NOVI BEOGRAD

Vesna Jocić, Milan Tešić, Marta Anđelić, Jovana Vasić

*Elementary school “Mladost”, Belgrade, Serbia*

Project based teaching was implemented into the education system of the Republic of Serbia from the academic year 2018/19 in order to encourage students to learn through different phases of research, and also in order to strengthen their competencies to be independent in that process. Therefore, a project called In Another Person’s Shoes was implemented in the elementary school “Mladost” from September 2018 to May 2019. The objective was to raise awareness of individual differences, understand the difficulties that people with developmental disabilities are facing and to increase capacity to show support to those persons. Approximately 300 students from 3<sup>rd</sup> to 8<sup>th</sup> grade were involved in this project. They gathered information about the subject through electronic media, internet and print media, cultural events (attending plays and watching films), by attending lectures and interviewing relevant external associates. Persons performing data gathering activities as well as the time necessary for the process were planned in advance depending on the school subject that was related to. Students performed the project presentation and final activities in the form of a round table where they presented their work individually and expressed their own conclusions. On that occasion, the objectives that had been set were evaluated through reflections of the audience and their active participation in the discussion. Based on that, we came to a conclusion that additional teaching of inclusive education done through performing independent research substantially expanded the students’ knowledge in that field, enhanced their interest in the subject and their understanding of the subject, provoked the feeling of empathy and made them perform further research and look for ways to have more adequate and more humane approach to their classmates who were facing different developmental difficulties.

*Key words: project based teaching, inclusion, elementary school*

## PSIHOSOCIJALNA PODRŠKA ADEKVATNOM RAZVOJU AFEKTIVNE VEZANOSTI KOD DECE KOJA ODRASTAJU U INSTITUCIJAMA

Irena Stojković\*\*, Marija Jelić

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Cilj rada je analiziranje literature o afektivnoj vezanosti dece koja odrastaju u institucijama i davanje preporuka za podršku adekvatnom razvoju afektivne vezanosti kod te dece. Deca koja odrastaju u institucijama doživljavaju kašnjenje u fizičkom, sazajnom i emocionalnom razvoju. Neadekvatan razvoj afektivne vezanosti, odnosno emocionalne veze između deteta i osobe koja o njemu brine, često se pokazuje kao posrednik između institucionalnog konteksta i razvojnih ishoda kod ove dece. U radu je izvršen pregled istraživanja o karakteristikama afektivne vezanosti kod dece koja rastu u institucijama, o faktorima koji utiču na razvoj njihove afektivne vezanosti i pružene su preporuke u vezi sa podrškom razvoju adekvatne afektivne vezanosti ove dece. Istraživanja iz različitih zemalja pokazuju da je sigurna afektivna vezanost ređa, dok su nesigurni i dezorganizovani stil afektivne vezanosti češći kod dece koja odrastaju u institucijama u poređenju sa drugom decom. Dalje, neki autori sugerišu da deca koja odrastaju u institucijama ne razvijaju u potpunosti oblikovane stilove afektivne vezanosti. Odrastanje u institucijama, usled velikog broja dece u odnosu na broj osoba koja se o njima staraju, čestih promena osoblja, ili prelazaka dece u različite grupe, većinom uskraćuje deci mogućnost da stvore neprekinuti odnos sa osetljivim negovateljem koji je preduslov za adekvatan razvoj afektivne vezanosti. Pokazuje se da razvoju adekvatne afektivne vezanosti kod dece koja rastu u institucijama pogoduju sledeće osobine stručnih osoba koje o njima brinu: topao emocionalni ton, interakcija sa detetom koja je u skladu sa detetovim uzrastom, osetljivost na dečje potrebe i odgovaranje na njih. Proporuke su da se za rad u institucijama za decu bez roditeljskog staranja vrši pažljivi odabir stručnjaka koji su motivisani za taj rad, da se institucije organizuju na načine koji stvaraju uslove za stvaranje dugotrajnog odnosa između deteta i osobe koja o njemu brine, i da se osoblju u tim institucijama pruži obrazovanje u vezi sa načinima interakcije sa decom koji povoljno doprinose razvoju afektivne vezanosti dece.

*Ključne reči: deca koja odrastaju u institucijama, deca bez roditeljskog staranja, afektivna vezanost, emocionalni razvoj*

---

\*\* irenas@fasper.bg.ac.rs

## PSYCHOSOCIAL SUPPORT OF ADEQUATE ATTACHMENT DEVELOPMENT IN CHILDREN REARED IN INSTITUTIONS

Irena Stojković, Marija Jelić

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

The aim of the paper is to analyze the literature on attachment in children reared in institutions and to provide recommendations regarding support of adequate attachment development in these children. Children reared in institutions experience delays in physical, cognitive and emotional development. Inadequate development of attachment, i.e. of an affectionate tie between a child and a caregiver, has often been shown to mediate the relationship between institutional context and developmental outcomes in these children. In the present paper we review studies on the characteristics of the attachment in children reared in institutions, on the factors which influence the development of attachment in these children, and we provide recommendations for supporting their adequate attachment development. Studies from various countries show that secure attachment is less frequent, whereas insecure and disorganized styles of attachment are more frequent in institutionalized children in comparison to other children. Furthermore, there are suggestions that institutionalized children might not develop fully formed attachments. Institutional rearing, due to high children per caregiver ratio, frequent turnovers of staff, or transfers of a child to numerous groups, often deprives children of the possibility to form a continuous relationship with a sensitive caregiver which is a prerequisite for adequate attachment development. The characteristics of a professional caregiver which have been shown to be beneficial for attachment development are warm emotional tone, age-appropriate interaction with a child, and sensitivity and responsiveness to child's needs. It is recommendable to carefully select professionals who are motivated for the work in institutions for children without parental care, to organize an institution in manners which enable longstanding relationships between children and particular caregivers, and to provide staff with education referring to ways of interacting with children which are beneficial for the development of attachment.

*Key words: institutionalized children, children without parental care, attachment, emotional development*

## TRANZICIONO PLANIRANJE ZA UČENIKE SA SMETNJAMA U RAZVOJU

Gordana Odović\*\*, Biljana Milanović Dobrota

*Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija*

Tranzicija kao termin odnosi se na prelazak iz jednog stanja ili okolnosti u drugu. Tokom života svakog čoveka dešavaju se mnoge značajne tranzicije. Neke od njih su povezane sa školovanjem, poput tranzicija iz predškolskih ustanova u osnovnu školu, iz osnovne škole u srednju školu i iz srednje škole u visoko školstvo ili svet rada. Ova poslednja tranzicija predstavlja kritičnu fazu za sve adolescente, a posebno za one sa smetnjama u razvoju. S obzirom na to da ključnu ulogu u tom procesu ima tranziciono planiranje, cilj rada je razmatranje dva značajna elementa ovog procesa, a to su izrada individualnog tranzicionog plana (ITP) i timski rad. ITP predstavlja deo individualnog obrazovnog plana (IOP). U Americi i mnogim evropskim zemljama zakonski je regulisana obaveza i procedura njegove izrade. Treba da bude izrađen do 16. godine učenika sa smetnjama u razvoju. Individualnim tranzicionim planom se skiciraju obuka i podrška koje će biti potrebne učeniku za postizanje tranzicionih ciljeva. Ovi ciljevi treba da budu merljivi i da ukazuju kako će izgledati život učenika nakon srednje škole u oblasti treninga ili obrazovanja, zapošljavanja i samostalnog života. Razmatranje i revidiranje ciljeva treba vršiti na godišnjem nivou. Drugi značajan element procesa tranzicionog planiranja je timski rad. Tim formiraju članovi tima za izradu IOP-a, učenik, njegova porodica, predstavnici različitih državnih agencija i drugi stručnjaci po potrebi. Tim se oslanja na stručnost članova i objedinjuje njihove informacije kako bi doneo odluku ili preporuku za učenika. Ovakav pristup tranzicionom planiranju povećava šanse za zapošljavanje i samostalan život učenika sa smetnjama u razvoju u odrasloj dobi.

*Ključne reči: tranzicija, individualni tranzicioni plan, merljivi ciljevi, srednja škola*

---

\*\* gordanaodovic@gmail.com

## TRANSITION PLANNING FOR STUDENTS WITH DISABILITIES

Gordana Odović, Biljana Milanović Dobrota

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Transition, as a term, refers to passing from one state or condition to another. Many important transitions occur throughout each person's life. Some of them are associated with schooling, such as transition from preschool to elementary school, elementary to high school, and from high school to higher schooling or world of work. The last transition is a critical stage for all teenagers and even more so for those with disabilities. Since transition planning plays a key role in this process, the aim of the paper is to consider two important elements of this process that include the Individual Transition Plan (ITP) and team-based work. The ITP is a part of student's Individualized Education Program (IEP). In the United States and many European countries, the obligation and procedure for its development is regulated by law. It should be developed for students with disabilities at the age of 16. The ITP outlines the training and support that will be needed for the student to achieve transition goals. These goals should be measurable and indicate what the student's life after high school will look like in areas of training or education, employment and independent living. The goals should be reviewed and revised on an annual basis. Another important element of the transition planning process is team-based work. The team includes the IEP Team members, student, his/her family, various state agencies representatives and other experts as needed. The team draws upon the expertise of different members and combines their information to make a decision or recommendation for the student. This approach to transition planning increases the chances of employment and independent living for students with disabilities in adulthood.

*Key words: transition, Individual Transition Plan, measurable goals, high school*

## ANALIZA POSTOJEĆIH MERA PODRŠKE ZA STUDENTE SA INVALIDITETOM NA UNIVERZITETU U BEOGRADU

Jasmina Karić<sup>\*\*a</sup>, Mirela Avdagić<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Univerzitetski centar za studente sa hendikepom, Beograd, Srbija

Rad se bavi analizom trenutnog stanja u oblasti inkluzivnog obrazovanja na tercijarnom nivou, preciznije, pregledom, tumačenjem i preporukama za dalje unapređenje i poboljšanje mera podrške, i posledično, akademske efikasnosti i uspešnosti studenata sa invaliditetom. U radu su prikazani rezultati analize upitnika Univerzitetskog centra za studente sa hendikepom o potrebi za dodatnom podrškom tokom akademske 2018/2019. godine. Upitnik je popunilo ukupno 38 studenata sa invaliditetom Univerziteta u Beogradu, na različitim nivoima studija, u periodu od septembra do novembra 2018. godine. Upitnik su popunjavali studenti sa različitim vrstama invaliditeta, od motoričkih, preko funkcionalno ograničavajućih hroničnih oboljenja do studenata sa psihičkim poteškoćama i teškoćama u komunikaciji, kako bi se imao što širi pregled različitih potreba. Upitnik se sastoji od 27 pitanja koja, pored opštih podataka o trenutnom studentskom statusu, stepenu studija i postignućima, spadaju i u specifični domen inkluzivnog obrazovanja, odnosno obuhvataju analizu postojećih potreba određenog studenta za dodatnim merama podrške pri studiranju i njenim formatom. Većina ispitanika kao primer potrebe za podrškom ističe trenutnu finansijsku podršku, u vidu oslobađanja od plaćanja školarine. Prisutna je specifična korelacija između tipa teškoća i potrebne podrške, pa nekolicina ispitanika sa motoričkim teškoćama izražava i potrebu da se okruženje adaptira u skladu sa principima pristupačnosti, kao i potrebu za podrškom pri učenju i organizovanom vršnjačkom asistencijom. Ispitanicima sa teškoćama u komunikaciji i psihičkim teškoćama ad hoc modifikacije formata nastave i ispita pomažu pri ispunjavanju pojedinih akademskih obaveza, dok ispitanici sa senzornim teškoćama ističu potrebu da se radi na senzibilnosti nastavnog osoblja i nedostatku asistivnih tehnologija. Na osnovu preliminarne analize odgovora zaključujemo da se postojeća podrška sastoji od rešavanja prepreka na bazi trenutne potrebe, a da dugoročno gledano postoje teškoće i neuspeh pri ispunjavanju akademskih obaveza. Ovakvi nalazi upućuju na potrebu da se sistem dodatne podrške jasno definiše i izgradi kako bi se pospešila akademska uspešnost studenata sa invaliditetom.

*Ključne reči: inkluzivno obrazovanje, dodatna podrška, studenti sa invaliditetom*

<sup>\*\*</sup> jkarić27@gmail.com

## EDUCATIONAL SUPPORT SYSTEMS FOR STUDENTS WITH DISABILITIES AT UNIVERSITY OF BELGRADE

Jasmina Karić<sup>a</sup>, Mirela Avdagić<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>University Center for Students with Disabilities, Belgrade, Serbia

The paper examines the current situation in the field of inclusive education at the tertiary level by reviewing and interpreting existing support systems and offering wide-ranging recommendations for further development of support measures and consequential improvement of educational outcomes for students with disabilities. The paper is based on an in-depth analysis of the annual questionnaire (academic year 2018/2019) carried out at the University Center for Students with Disabilities (University of Belgrade). The purpose of this questionnaire is the assessment of individual and general needs of students with disabilities for additional support. The questionnaire was filled in by a total of 38 students with disabilities at the University of Belgrade, at different degree levels, in the time frame September - November 2018. In order to gain a broader perspective, the questionnaire was filled in by students with different types of disabilities, ranging from physical disability, chronic conditions which limit the scope of everyday functionality, speech difficulties, to students with mental health conditions and students with autism spectrum disorders. The questionnaire consists of 27 questions which, beside general information regarding current student status, degree of studies and achievements, also deal with the specifics of inclusive education by determining types of support students find most effective and necessary. The majority of respondents emphasize financial support as an example of needed support, in the form of tuition fees waiver. There is also a specific correlation between the type of difficulties and the necessary support, so several respondents with mobility impairments express the need to adapt the environment in accordance with the principles of accessibility, as well as the need for support in learning and organized peer assistance. Ad hoc modifications of teaching and exam formats help questionnaire respondents with psychological and communication disorders in fulfilling academic obligations, while respondents with sensory difficulties emphasize the need to work on the sensitization of teaching staff and the lack of assistive technologies. Based on the preliminary analysis of the answers, we conclude that the existing support consists of obstacle solving based on current needs, which in the long run leads to difficulties and failures in fulfilling academic obligations. Such findings indicate the need for the support system to be clearly defined and built in order to promote the academic performance of students with disabilities.

*Key words: inclusive education, educational support, disability, students, system measures*

## SAMOREGULACIJA I ZADOVOLJSTVO AKADEMSKOM PODRŠKOM KOD STUDENATA SA INVALIDITETOM\*

Vesna Vučinić\*\*<sup>a</sup>, Dragana Stanimirović<sup>a</sup>, Marija Anđelković<sup>a</sup>, Milica Filajdić<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Muzička škola „Kosta Manojlović“, Beograd, Srbija

Samoregulacija predstavlja sposobnost upravljanja ponašanjem u procesu ostvarivanja ciljeva u okolnostima koje se vremenom menjaju. Imajući u vidu da prilagođavanje na uslove realizacije cilja zavisi od prethodnog iskustva, samoregulacija je cikličan proces koji bitno određuje karakteristike emocionalnog razvoja. Cilj istraživanja je utvrđivanje odnosa između veština samoregulacije i zadovoljstva akademskom podrškom kod studenata sa invaliditetom. Uzorkom su obuhvaćena 84 studenta sa invaliditetom (oštećenjem vida, oštećenjem sluha, motoričkim poremećajem, hroničnim oboljenjem i specifičnim teškoćama učenja). U istraživanju je korišćen Upitnik zadovoljstva studenata sa invaliditetom akademskom podrškom i Upitnik za procenu samoregulacije. U obradi dobijenih podataka korišćena je deskriptivna statistika i analiza varijanse. Praćenjem postignuća na subskalama Upitnika za procenu samoregulacije zaključeno je da studentima sa invaliditetom najveći problem predstavlja planiranje (AS = 27,98; Min = 19; Max = 37), a najmanje teškoća se javlja kod procene sprovođenja plana (AS = 32,69; Min = 19; Max = 42). Studenti koji pozitivnije procenjuju veštine samoregulacije zadovoljniji su akademskom podrškom na univerzitetu ( $p = 0,008$ ). Posmatrano po domenima, studenti koji se suočavaju sa manje teškoća u veštinama traženja opcija ( $p = 0,005$ ), aktivnostima planiranja ( $p = 0,035$ ) i implementacije plana ( $p = 0,023$ ) pozitivnije procenjuju kvalitet akademske podrške dobijene na univerzitetu. Sistematizacija podataka o odnosu između veština samoregulacije i zadovoljstva akademskom podrškom može da doprinese unapređenju položaja studenata sa invaliditetom na univerzitetu. Kako im najveći problem predstavlja planiranje, a najmanji sprovođenje plana, moglo bi se zaključiti da im manjak planova i olakšava njihovu realizaciju.

*Ključne reči: samoregulacija, zadovoljstvo akademskom podrškom, studenti sa invaliditetom*

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* vesnavucinic@live.com



## SELF-REGULATION AND SATISFACTION WITH ACADEMIC SUPPORT IN STUDENTS WITH DISABILITY\*

Vesna Vučinić<sup>a</sup>, Dragana Stanimirović<sup>a</sup>, Marija Anđelković<sup>a</sup>, Milica Filajdić<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Music school “Kosta Manojlović”, Belgrade, Serbia

Self-regulation is the ability to manage behavior in the process of achieving goals in circumstances that change over time. The adaptation to the conditions of realizing a goal depends on previous experience; hence self-regulation is a cyclical process which significantly determines the characteristics of emotional development. The aim of this research was to determine the relationship between self-regulation skills and satisfaction with academic support in students with disability. The sample included 84 students with disability (visual impairment, hearing impairment, motor disorder, chronic illness and specific learning disability). The Questionnaire on students with disability satisfaction with academic support and the Questionnaire for assessing self-regulation were used in this research. Descriptive statistics and Variance analysis were used in the analysis of the obtained data. By monitoring the achievements on the questionnaire for assessing self-regulation subscales, it was determined that planning represented the biggest problem for students with disability (M = 27.98; Min = 19; Max = 37), while they had the least problems with the assessment of plan implementation (M = 32.69; Min = 19; Max = 42). Students who assessed self-regulation skills more positively were more satisfied with academic support at the University in Serbia ( $p = 0.008$ ). With regard to specific domains, students who faced fewer difficulties in looking for options ( $p = 0.005$ ), planning ( $p = 0.035$ ), and plan implementation ( $p = 0.023$ ) assessed the quality of academic support at the University more positively. Systematization of data on the relation between self-regulation skills and satisfaction with academic support can contribute to the improvement of the position of students with disabilities at university. With planning being their biggest, and plan implementation their least problem, it can be concluded that the lack of plans makes their implementation easier.

*Key words: self-regulation, satisfaction with academic support, students with disability*

---

\* This paper is a result of the project “Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs” (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## SINDROM PROFESIONALNOG SAGOREVANJA KOD DEFEKTOLOGA I NASTAVNIKA ZAPOSLENIH U OBRAZOVNIM USTANOVAMA

Aleksandra Pantović<sup>\*\*</sup>, Dragana Maćešić Petrović<sup>a</sup>, Ružica Zdravković<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Logopedilište, Beograd, Srbija

Profesionalno sagorevanje predstavlja sindrom emocionalne iscrpljenosti, depersonalizacije i smanjenog ličnog postignuća koji se često javlja kod osoba zaposlenih u pomagačkim profesijama, među kojima je i profesija defektologa i nastavnika. Istraživanje prikazano u ovom radu je sprovedeno sa ciljem da se utvrdi nivo i rasprostranjenost sindroma profesionalnog sagorevanja kod defektologa i nastavnika zaposlenih u obrazovnim ustanovama u Srbiji, kao i da se utvrdi povezanost i specifičnih sociodemografskih varijabli sa sindromom profesionalnog sagorevanja ove populacije. Uzorkom je obuhvaćeno 117 prosvetnih radnika (63 (54%) nastavnika i 54 (46%) defektologa), zaposlenih u redovnim i specijalnim osnovnim školama na teritoriji Republike Srbije. Profesionalno sagorevanje ispitivano je primenom instrumenta MBI-Educators Survey (MBI-ES) i to kroz tri kategorije: emocionalnu iscrpljenost, depersonalizaciju i percepciju ličnog postignuća (Maslac, 2003). Navedene kategorije predstavljaju komponente sindroma profesionalnog sagorevanja čiji simptomi, ukoliko se manifestuju kod pojedinca, mogu da ukažu na prisustvo sindroma profesionalnog sagorevanja. Rezultati ovog istraživanja pokazuju da 58,1% ispitivanog uzorka pokazuje znake emocionalne iscrpljenosti (23,1% ima visok nivo, a 35,0% umeren nivo emocionalne iscrpljenosti), kao i da simptome sagorevanja u dimenziji ličnog postignuća ispoljava 49,6% ispitanika (29,9% ima umeren skor, a 19,7% nizak skor). Na osnovu dobijenih rezultata možemo da uočimo da je problem profesionalnog sagorevanja prisutan kod obrazovnog kadra različitog usmerenja. Imajući to u vidu, smatramo da je bitno istaći da je problem profesionalnog sagorevanja stručnjaka koji rade sa decom od velikog značaja za sve aktere u obrazovanju, počevši od ministarstva prosvete, prekoškolske uprave i samih nastavnika, do roditelja čije dete ide u razred u kojem nastavnik gubi želju za radom. Na osnovu izloženog zaključujemo da je neophodno, u dogovoru sa nadležnim organima, formirati strategije za prevenciju i tretman ove „moderne bolesti“.

*Ključne reči: profesionalno sagorevanje, defektolog, nastavnik, obrazovanje*

<sup>\*\*</sup> aleksandra@fasper.bg.ac.rs

## BURNOUT SYNDROM AMONG SPECIAL AND REGULAR EDUCATION TEACHERS WORKING IN EDUCATIONAL INSTITUTIONS

Aleksandra Pantović<sup>a</sup>, Dragana Maćešić Petrović<sup>a</sup>, Ružica Zdravković<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Logopedilište, Belgrade, Serbia

Burnout is a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that usually occurs among people working in the helping professions, such as education. The central aim of the present study was to determine the level and distribution of burnout among special education and regular education teachers working in special education and regular education schools in Serbia, as well as to establish the association between specific socio-demographic variables with burnout in this population. The sample consisted of 117 educators (63 (54%) regular education teachers and 54 (46%) special education teachers) employed in primary schools in Serbia. The level of burnout was investigated using the instrument MBI-Educators Survey (MBI-ES), through three categories: emotional exhaustion, depersonalization and perception of personal accomplishment. These categories represent the components of burnout whose symptoms, if manifested in an individual, may indicate the presence of burnout. The results show that 58.1% of the sample had signs of emotional exhaustion (23.1% had high levels of emotional exhaustion and 35.0% moderate level of emotional exhaustion), while 49.6% had low level of personal accomplishment (29.9 moderate, and 19.7 low). Based on our findings, burnout syndrome is present in teachers and special educators, which further raises the question of developing strategies for prevention and treatment of burnout syndrome among educators at the national level.

*Key words: burnout, special education, regular education, MBI-Educators Survey*

## IZLOŽENOST NASTAVNIKA NASILNOM PONAŠANJU UČENIKA U SREDNJIJIM ŠKOLAMA ZA UČENIKE SA SMETNJAMA U RAZVOJU\*

Vesna Žunić Pavlović<sup>\*\*a</sup>, Miroslav Pavlović<sup>b</sup>, Svetlana Kaljača<sup>a</sup>, Nenad Glumbić<sup>a</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Zavod za unapređivanje obrazovanja i vaspitanja, Beograd, Srbija

Poslednjih godina, viktimizacija nastavnika na radnom mestu postala je predmet interesovanja brojnih istraživača iz različitih zemalja. Prethodna istraživanja sugerišu da je većina nastavnika doživela nasilno ponašanje učenika tokom karijere, a da su nastavnici zaposleni u školama za učenike sa smetnjama u razvoju posebno ugroženi. Cilj ovog istraživanja je utvrđivanje razlika u učestalosti i pojavnim oblicima nasilnog ponašanja učenika prema nastavnicima u srednjim školama za učenike sa smetnjama u razvoju u odnosu na druge srednje škole. Uzorak čini 96 nastavnika u školama za učenike sa smetnjama u razvoju i 566 nastavnika u gimnazijama, srednjim stručnim školama i srednjim umetničkim školama. Za procenu viktimizacije nastavnika korišćen je upitnik Radne grupe za nasilje u učionici usmereno prema nastavnicima Američkog udruženja psihologa (APA Classroom Violence Directed Against Teachers Task Force). Rezultati istraživanja pokazuju da između dva poduzorka nastavnika nema razlika u ukupnoj viktimizaciji, ali da postoje značajne razlike u pogledu pojava oblika nasilnog ponašanja učenika kojima su izloženi. Nastavnici u školama za učenike sa smetnjama u razvoju učestalije su izloženi nepristojnim rečima [ $t(115,953) = -2,841$ ;  $p = 0,005$ ;  $\eta^2 = 0,01$ ] i nepristojnim gestovima [ $t(111,666) = -2,441$ ;  $p = 0,016$ ;  $\eta^2 = 0,01$ ], a nastavnici u drugim srednjim školama elektronskom nasilju [ $t(572,475) = 4,617$ ;  $p < 0,001$ ;  $\eta^2 = 0,03$ ] i pretnjama oružjem [ $t(565,000) = 3,498$ ;  $p = 0,001$ ;  $\eta^2 = 0,02$ ]. Dobijeni nalazi podržavaju pretpostavku o specifičnostima nasilnog ponašanja učenika prema nastavnicima u školama za učenike sa smetnjama u razvoju i impliciraju potrebu za daljim proučavanjem ove problematike.

*Ključne reči: nasilje, nastavnici, specijalna edukacija, viktimizacija*

\* Rad je nastao kao rezultat istraživanja na projektima „Socijalna participacija osoba sa intelektualnom ometenošću“ (br. 179017) i „Kriminal u Srbiji: fenomenologija, rizici i mogućnosti socijalne intervencije“ (br. 47011), koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* vzunicpavlovic@gmail.com

## TEACHERS' EXPOSURE TO VIOLENT BEHAVIOR OF STUDENTS IN SECONDARY SCHOOLS FOR STUDENTS WITH DISABILITIES\*

Vesna Žunić Pavlović<sup>a</sup>, Miroslav Pavlović<sup>b</sup>, Svetlana Kaljača<sup>a</sup>, Nenad Glumbić<sup>a</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Institute for the Improvement of Education, Belgrade, Serbia

In recent years, victimization of teachers in the workplace has become a subject of interest to numerous researchers from different countries. Previous research suggests that most teachers have experienced students' violent behavior during their careers, and that teachers in schools for students with disabilities are particularly vulnerable. The aim of this research was to determine the differences in frequency and forms of students' violent behavior directed against teachers in secondary schools for students with disabilities compared to other secondary schools. The sample consisted of 96 teachers in secondary schools for students with disabilities and 566 teachers in grammar schools, vocational secondary schools and secondary art schools. APA Classroom Violence Directed Against Teachers Task Force questionnaire was used to collect data on students' violent behavior directed against teachers. Research results indicated that there were no differences in total victimization between two subsamples of teachers, but there were significant differences in the forms of students' violent behavior they were exposed to. Teachers in schools for students with disabilities were more often exposed to obscene remarks [ $t(115.953) = -2.841$ ;  $p = 0.005$ ;  $\eta^2 = 0.01$ ] and obscene gestures [ $t(111.666) = -2.441$ ;  $p = 0.016$ ;  $\eta^2 = 0.01$ ], while exposure to electronic violence [ $t(572.475) = 4.617$ ;  $p < 0.001$ ;  $\eta^2 = 0.03$ ] and weapons threats [ $t(565.000) = 3.498$ ;  $p = 0.001$ ;  $\eta^2 = 0.02$ ] were more frequent in other secondary schools. The obtained findings support the assumption about the specificities of students' violent behavior directed against teachers in schools for students with disabilities and imply the need for further study of this problem.

*Key words: violence, teachers, special education, victimization*

---

\* This paper is a result of the projects "Social Participation of Persons with Intellectual Disability" (No. 179017) and "Crime in Serbia: Phenomenology, Risks and the Possibilities of Social Intervention" (No. 47011), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

# MOTORIČKI POREMEĆAJI

## MOTOR DISORDERS

---

## POVEZANOST IZMEĐU MOTORIČKIH SPOSOBNOSTI I FIZIČKE AKTIVNOSTI KOD DECE SA SMETNJAMA U RAZVOJU

Ivana Sretenović\*\*, Goran Nedović, Dragan Rapačić

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Motoričke sposobnosti su izuzetno značajne za svako dete. Ukoliko je dete motorički sposobno, onda će biti spremno i da aktivno participira u igri, sportskim ili rekreativnim aktivnostima. Cilj rada je bio da se utvrdi povezanost između motoričkih sposobnosti i fizičke aktivnosti kod dece uzrasta 7 do 15 godina. U istraživanju je učestvovalo 225 učenika osnovnoškolskog uzrasta sa motoričkim, senzornim i kognitivnim smetnjama, oba pola. Za procenu motoričkih sposobnosti korišćen je Bruininks-Oseretsky Test of Motor Proficiency, 2nd edition, dok su informacije o fizičkoj aktivnosti prikupljene pomoću upitnika koji je kreiran za potrebe istraživanja. Vezu između motoričkih sposobnosti i participacije u fizičkim aktivnostima istražili smo pomoću Spirmanovog rho koeficijenta. Dobijena je mala i pozitivna korelacija između dve promenljive ( $r = 0,15$ ,  $p = 0,025$ ), pri čemu je veća participacija u fizičkim aktivnostima praćena boljom opštom motoričkom sposobnošću. Rezultati istraživanja su još pokazali da dobro razvijena opšta motorička sposobnost objašnjava svega 2,2% varijanse u fizičkoj aktivnosti. Dobro razvijene motoričke sposobnosti kod dece osnovnoškolskog uzrasta predstavljaju bazu koja može da posluži za njihovo veće učestvovanje u raznim fizičkim aktivnostima. Međutim, nisu samo motoričke sposobnosti odgovorne za participaciju u fizičkim aktivnostim, te bi neka dalja istraživanja trebalo da budu usmerena ka analizi ostalih faktora.

*Ključne reči: opšta motorička sposobnost, participacija, igra, rekreacija, fizička aktivnost*

---

\*\* ivanasretenovic@fasper.bg.ac.rs

## THE RELATIONSHIP BETWEEN MOTOR ABILITIES AND PHYSICAL ACTIVITIES IN CHILDREN WITH DISABILITIES

Ivana Sretenović, Goran Nedović, Dragan Rapačić

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Motor abilities are extremely important for every child. If a child is motor-capable then he/she will be ready to actively participate in a game, sports or recreational activities. The aim of this study was to examine the relationship between motor abilities and physical activities in children 7 to 15 years of age. The study included 225 students with motor, sensory and cognitive disorders, of both sexes. All respondents were elementary school students. For the evaluation of motor abilities, the Bruininks-Oseretsky Test of Motor Proficiency, 2<sup>nd</sup> edition, was used, while information about physical activities were collected using a questionnaire created for research purposes. The relationship between motor abilities and participation in physical activities was investigated using the Spearman's rho coefficient. A small and positive correlation between two variables ( $r = 0.15$ ,  $p = 0.025$ ) was obtained, whereby higher participation in physical activities was accompanied by better overall motor abilities. Furthermore, the results have shown that well-developed overall motor ability explains only 2.2% variance in physical activities. Well-developed motor abilities in children of primary school age represent a base that can serve for their even higher participation in various physical activities. However, not only motor abilities are responsible for participation in physical activities, but some further research should also be directed to the analysis of other factors.

*Key words: overall motor ability, participation, play, recreation, physical activity*



## FONOLOŠKE KARAKTERISTIKE MATERNJEG I STRANOG JEZIKA KOD DECE SA RAZVOJNIM POREMEĆAJEM KOORDINACIJE\*

Jovana Janjić\*\*, Snežana Nikolić, Danijela Ilić Stošović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Razvojni poremećaj koordinacije se manifestuje smetnjama u planiranju i koordinaciji složenih pokreta potrebnih za prilagođavanje okolini tokom akcije, bez prethodno dijagnostikovane intelektualne ometenosti, neurološkog ili nekog drugog senzornog oštećenja. Kako se radi o relativno čestom poremećaju kod školske dece, neretko udruženim sa govorno-jezičkim poremećajima i smetnjama u ovladavanju akademskih veština čitanja i pisanja, procena fonoloških karakteristika na maternjem i stranom jeziku kod ove grupe dece može omogućiti detekciju smetnji na fonološkom nivou, koje su u osnovi veština čitanja i pisanja na oba jezika. Uzorak je činilo 50 učenika trećeg razreda redovne osnovne škole sa teritorije Beograda, podeljenih u dve grupe, 25 dece sa razvojnim poremećajem koordinacije i 25 dece bez teškoća u koordinaciji. U istraživanju je korišćen Upitnik za razvojni poremećaj koordinacije (DCDQ), Test fonološke svesnosti (Subotić, 2011) i Dynamic Indicators of Basic Early Literacy Skills (DIBELS, 2007) – Test za procenu imenovanja slova na engleskom jeziku (Letter Naming Fluency) i Test za procenu prepoznavanja inicijalnog glasa na engleskom jeziku (Initial Sound Fluency). Analiza rezultata pokazuje statistički značajne razlike u postignućima dece sa razvojnim poremećajem koordinacije u odnosu na decu bez ove teškoće na testovima identifikacije početnog i završnog fonema, na testu eliminacije fonema i fonemske supstitucije, kao i na testu imenovanja slova na engleskom jeziku i testu prepoznavanja inicijalnog glasa. Dobijeni rezultati ukazuju na to da deca sa razvojnim poremećajem koordinacije pokazuju smetnje u fonološkoj obradi na oba jezika u odnosu na decu bez ove teškoće, što može biti značajan prediktor u ovladavanju veštine čitanja i pisanja na oba jezika kod ove grupe dece.

*Ključne reči: razvojni poremećaj koordinacije, fonološke sposobnosti, maternji jezik, strani jezik*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* jovanajanjić84@hotmail.com

## PHONOLOGICAL CHARACTERISTICS OF MOTHER AND FOREIGN LANGUAGE IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER\*

Jovana Janjić, Snežana Nikolić, Danijela Ilić Stošović

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

The developmental coordination disorder is manifested by difficulties in the planning and execution of coordinated motor abilities, without previously diagnosed intellectual delay, neurological condition or other sensory impairments. As a frequent disorder in school age children, commonly associated with speech-language disorders and learning disabilities associated with academic skills, primarily reading and writing, the assessment of phonological characteristics in mother tongue and foreign language in this group of children can provide detection of a delay on phonological level, which is the basis of reading and writing skills in both languages. The sample consisted of 50 third grade elementary school children from Belgrade, divided into two groups, 25 children with developmental coordination disorder and 25 children without coordination difficulties. For the assessment we used The Developmental Coordination Disorder Questionnaire (DCDQ), Phonological Awareness Test (Subotić, 2011) and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS, 2007) – Test of Letter Naming Fluency and Test of Initial Sound Fluency. The analysis of the results showed statistically significant differences in the achievement of children with developmental coordination disorder in relation to children without coordination difficulties on the tests of identification of initial and final phonemes, on the test of elimination of phonemes and phonemic substitution, as well as on the Test of Letter Naming Fluency and Test of Initial Sound Fluency. The obtained results indicate that children with developmental coordination disorder show phonological processing delay in both languages compared to children without this difficulty, which can be a significant predictor in mastering of reading and writing in both languages in this group of children.

*Key words: developmental coordination disorder, phonological abilities, mother language, foreign language*

---

\* This paper is a result of the project “Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs” (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

# KINESTETIČKA SENZITIVNOST KAO DETERMINANTA ČITLJIVOSTI RUKOPISA UČENIKA SA I BEZ TEŠKOĆA U PISANJU\*

Marina Vujanović\*\*<sup>a</sup>, Danijela Ilić Stošović<sup>b</sup>

<sup>a</sup>Osnovna škola „Miodrag Matić“, Beograd, Srbija

<sup>b</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Pisanje kao veština od čijeg kvaliteta zavisi vaspitno-obrazovni proces učenika, pod uticajem je mnogobrojnih faktora. Kako je kinestetička senzitivnost jedna od determinanti kvaliteta pisanja, cilj ove studije jeste da se utvrdi povezanost kinestetičke senzitivnosti i čitljivosti rukopisa učenika sa i bez teškoća u pisanju. Istraživanje je sprovedeno tokom 2016. godine u osam beogradskih osnovnih škola, na uzorku od 1156 učenika nižih razreda osnovne škole. Kao instrumenti procene korišćeni su Protokol za procenu pisanja (*The McMaster Handwriting Assessment Protocol – 2<sup>nd</sup> edition*), Lurija Nebraska neuropsihološka baterija testova (*Luria-Nebraska Neuropsychological Battery: Children's Revision*) i posebna metodologija za procenu jačine i konzistentnosti pritiska. Rezultati dobijeni procenom brzine pisanja i čitljivosti napisanog teksta pokazuju da se kod 118 učenika (10,2%) beleže teškoće u pisanju. Kada se posmatra povezanost čitljivosti rukopisa i kompozitnog skora kinestetičke senzitivnosti kod učenika sa teškoćama u pisanju ( $r = -0,42$ ) i učenika bez teškoća u pisanju ( $r = -0,47$ ), dolazi se do rezultata da postoji umerena negativna korelacija kod obe grupe učenika. Ukoliko se posmatra korelacija pojedinačnih proba za procenu kinestetičke senzitivnosti i čitljivosti rukopisa, dolazi se do rezultata da se najjača povezanost kod učenika sa teškoćama u pisanju beleži sa hvatom olovke ( $r = -0,49$ ) i konzistentnosti pritiska ( $r = -0,39$ ). Najveća razlika u jačini povezanosti kinestetičke senzitivnosti i čitljivosti rukopisa učenika sa i bez teškoća u pisanju beleži se prilikom procene konzistentnosti pritiska, pri čemu se jača povezanost beleži u grupi učenika koji nemaju teškoće u pisanju ( $r = -0,65$ ). Dobijeni rezultati su veoma značajni za proces prilagođavanja vaspitno-obrazovnog procesa učeniku sa teškoćama u pisanju, kroz mere individualizacije ili individualni obrazovni plan. Učešće defektologa u ovim aktivnostima jeste neophodno zbog toga što su pravovremena detekcija ovih teškoća i njihova stimulacija izuzetno važne, ne samo zbog povezanosti razvoja sposobnosti pisanja sa školskim postignućima, već i sa formiranjem ličnosti učenika kao bio-psiho-socijalne jedinice.

*Ključne reči: defektolog, individualni obrazovni plan, kinestetička senzitivnost, pisanje, teškoće u pisanju*

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* milivojevicmarinam@gmail.com

## KINESTHETIC SENSITIVITY AS A DETERMINANT OF WRITING LEGIBILITY IN STUDENTS WITH AND WITHOUT WRITING DIFFICULTIES\*

Marina Vujanović<sup>a</sup>, Danijela Ilić Stošović<sup>b</sup>

<sup>a</sup>Elementary school "Miodrag Matić", Belgrade, Serbia

<sup>b</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

Writing, as a skill whose quality depends on the educational process of students, is influenced by many factors. As kinesthetic sensitivity is one of the determinants of the quality of writing, the aim of this study was to determine the correlation of kinesthetic sensitivity and the legibility of writing in students with and without writing difficulties. The survey was conducted in 2016 in eight Belgrade elementary schools, on a sample of 1156 students of lower grades of elementary school. The McMaster Handwriting Assessment Protocol (2<sup>nd</sup> edition), the Luria Nebraska Neuropsychological Battery (Children's Revision) and a specific methodology for assessing the strength and consistency of the pressure were used as measuring instruments. The results obtained by assessing the speed of writing and the legibility of the written text show that 118 students (10.2%) had writing difficulty. When one examines the relation between the legibility of writing and the composite score of kinesthetic sensitivity in students with difficulty in writing ( $r = -0.42$ ) and students without writing difficulty ( $r = -0.47$ ), the result shows a moderate negative correlation in both groups of students. If we examine the correlation of individual tests for assessing kinesthetic sensitivity and the legibility of the writing task, the result shows that the strongest relation among the students with writing difficulties was recorded with regard to pen grasp ( $r = -0.49$ ) and pressure consistency ( $r = -0.39$ ). The greatest difference in the degree of correlation between kinesthetic sensitivity and the readability of students' handwriting with and without writing difficulty was noted when assessing the consistency of the pressure, while stronger interaction was recorded in the group of students who did not have writing difficulties ( $r = -0.65$ ). These results are very important for the process of adapting the educational process to students with writing difficulties, through individualization measures or individual educational plan. The participation of special educator in these activities is necessary because timely detection of these difficulties and their stimulation is extremely important, not only because of the connection between the development of writing skills and school achievements, but also for the formation of students' personalities as a bio-psycho-social entity.

*Key words: individual educational plan, kinesthetic sensitivity, special educator, writing, writing difficulties*

\* This paper is a result of the project "Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs" (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## MOTORIČKO FUNKCIONISANJE KAO INDIKATOR NUMERIČKIH SPOSOBNOSTI\*

Snežana Nišević\*\*<sup>a,b</sup>, Snežana Nikolić<sup>c</sup>

<sup>a</sup>Osnovna škola „Boško Buha“, Beograd, Srbija

<sup>b</sup>Resursni centar „Znanje“, Beograd, Srbija

<sup>c</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd

Ovo istraživanje bavi se odnosom motoričkog funkcionisanja i matematičkih (numeričkih) veština u kontekstu čestog komorbiditeta kod neurorazvojnih poremećaja, pre svega motoričkog poremećaja sa teškoćama u učenju / egzekutivnim funkcijama. Cilj rada je da ispita da li se razvoj logičkih operacija (LO), kao preduslova za efikasno rešavanja matematičkih (numeričkih) problema, može objasniti motoričkim funkcionisanjem. Uzorak je činilo 331 dete školskog uzrasta oba pola, starosti od 7,3 do 11 godina bez medicinskog rizika i bolesti, prosečne i natprosečne inteligencije. Procenjeno je motoričko funkcionisanje, kao prediktivna varijabla, u domenima neuromaturacija, opšte motoričke sposobnosti, senzorno-motorna integracija, izvođenje pokreta na verbalni nalog i imitacijom, a logičke operacije u aspektima inkluzija broja (IN), kontekstualno korišćenje informacija (CI), odabir relevantne informacije (RI), korišćenje aritmetičkog principa (AP) kao zavisna varijabla. Hijerarhijska regresiona analiza, nakon uklanjanja uticaja IQ, pokazala je da skup prediktorskih varijabli objašnjava 22,2% ( $p < 0,001$ ) uspešnosti u zadacima logičkih operacija. Pojedinačno, model objašnjava 18,9% ( $p < 0,001$ ) varijanse za zadatak inkluzija broja, 17,7% ( $p < 0,001$ ) kontekst informacija, 13,2% ( $p = 0,004$ ) odabir relevantne informacije i 19,0% ( $p = 0,001$ ) korišćenje aritmetičkog principa. Nađena je značajna korelacija između posmatranih domena motoričkog funkcionisanja i logičkih operacija. Rezultati pokazuju da je motoričko funkcionisanje značajan indikator razvoja logičkih operacija kao pretpostavke numeričkih veština. Korišćeni model procene mogao bi biti koristan u identifikaciji dece koja su u riziku od podbacivanja u matematici, a profil motoričkog razvoja u kreiranju individualnih rehabilitacionih i korektivnih programa i strategija podrške u nastavi matematike.

*Ključne reči: motoričko funkcionisanje, logičke operacije, razvojni poremećaji, numeričke sposobnosti*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* snezanisevic@gmail.com

## MOTOR FUNCTIONING AS AN INDICATOR OF NUMERICAL ABILITIES\*

Snežana Nišević<sup>a,b</sup>, Snežana Nikolić<sup>c</sup>

<sup>a</sup>Elementary School “Boško Buha”, Belgrade, Serbia

<sup>b</sup>Resource Center “Knowledge”, Belgrade, Serbia

<sup>c</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

This research deals with the relation between motor functioning and mathematical (numerical) skills in accordance with comorbidity in neurodevelopmental disorders, in particular motor disorder with learning disabilities / executive functions. The aim of this paper was to investigate whether logical operations (LO) as the prerequisite of efficient mathematical (numerical) problem solving can be explained by motor functioning. The sample consisted of 331 school-age children of both genders, aged between 7.3 to 11, without medical risk and diseases, with average and above-average intelligence. In the study, we examined motor functioning in the domain of neuromaturation, general motor abilities, sensory-motor integration, execution of movements on verbal order and imitation, as a predictive variable, and logical operations in aspects of inclusion of number (IN), contextual use of information (CI), selection of relevant information (RI), using the arithmetic principle (AP) as a dependent variable. Hierarchical regression analysis, after removing the impact of IQ, showed that a set of predictor variables explains 22.2% ( $p < 0.001$ ) of variance in logical operations. The model explained 18.9% ( $p < 0.001$ ) of variance in inclusion of number, 17.7% ( $p < 0.001$ ) in context of information, 13.2% ( $p = 0.004$ ) in selection of relevant information and 19.0% ( $p = 0.001$ ) in using the arithmetic principle. A significant correlation between observed domains of motor functioning and logical operations was found. The results show motor functioning as a significant indicator of the development of logical operations as the assumption of numerical skills. The used assessment model can be useful in identifying children at risk for mathematical underachievement. Motor development profile can be used in creating individual rehabilitation and corrective programs and support strategies in mathematics teaching.

*Key words: motor functioning, logical operations, developmental disorders, numerical abilities*

---

\* This paper is a result of the project “Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs” (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## GENSKA DIJAGNOZA KOD DIŠENOVE I BEKEROVE MIŠIĆNE DISTROFIJE I DETEKCIJA PRENOSIOCA

Jasmina Maksić<sup>\*\*a</sup>, Ivana Novaković<sup>b</sup>, Dragan Rapačić<sup>a</sup>, Mirjana Mitrović<sup>c</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Univerzitet u Beogradu – Medicinski fakultet, Institut za humanu genetiku, Beograd, Srbija

<sup>c</sup>Očna ordinacija Mitrović, Beograd, Srbija

Dišenova i Bekerova mišićna distrofija (DMD i BMD) su progresivne mišićne bolesti koje nastaju usled mutacija u genu za distrofin. Gen za distrofin (DMD gen, Xp21.1) je veličine 2,4MB i podložan je promenama u strukturi. Najčešće su prisutne intragenske delecije (65-70%) jednog ili više egzona, sa specifičnom distribucijom u genu (egzoni 2-20 i egzoni 45-55) i duplikacije (5-15%), a ostatak čine male mutacije – tačkaste mutacije, mikroinsercije, mikrodelecije i splice-site mutacije. Procenjeno je da 1/3 DMD bolesnika ima de novo mutaciju, a da su u 2/3 slučajeva majke prenosioci mutacije. Genska dijagnoza DMD/BMD se može postaviti primenom direktne ili indirektno molekularno genetičke analize. Metoda lančane reakcije polimerizacije (PCR) je direktna metoda koja omogućuje detekciju oko 98% svih delecija otkrivenih u DMD genu. Ipak, ovom metodom se ne mogu otkriti delecije van predilekcionih regiona gena, kao ni duplikacije, i nije korisna kod detekcije žena prenosioca mutacije. Metoda višestrukog umnožavanja vezanih proba (MLPA) je omogućila kvantitativnu analizu gena i otkrivanje delecija i van predilekcionih regiona gena, kao i duplikacija, kako kod obolelih tako i kod žena prenosioca mutacije, pa je postala standard u DMD/BMD dijagnozi. Kada se ovim metodama ne otkriju delecije i duplikacije u genu za distrofin, u cilju traganja za tačkastim mutacijama, ispitivanje se nastavlja metodom sekvenciranja DNK. Ipak, zbog izuzetne veličine gena i slučajnog rasporeda tačkastih mutacija može se prvo primeniti analiza vezanosti kao indirektna dijagnostička metoda. Ona podrazumeva praćenje nasleđivanja rizičnog hromozoma kod ženskih i muških članova u porodici, putem praćenja polimorfni DNK markera koji se nalaze u okviru DMD gena, ili u njegovoj blizini. Ograničenja metode su postojanje neinformativnih genotipova, rekombinacije u DMD genu, a zahteva i ispitivanje više članova u porodici. Postavljanje precizne dijagnoze kod obolelog i otkrivanje žena prenosioca mutacije je od značaja za davanje adekvatnog genetičkog saveta i sprovođenje prenatalne dijagnoze.

*Ključne reči: distrofinopatije, djagnoza distrofinopatija, detekcija prenosioca*

<sup>\*\*</sup> maxic164@eunet.rs

## GENE DIAGNOSIS OF DUCHENNE AND BECKER MUSCULAR DYSTROPHY AND CARRIER DETECTION

Jasmina Maksić<sup>a</sup>, Ivana Novaković<sup>b</sup>, Dragan Rapaić<sup>a</sup>, Mirjana Mitrović<sup>c</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>University of Belgrade – Faculty of Medicine, Institute of Human Genetics, Belgrade, Serbia

<sup>c</sup>Ophthalmology practice Mitrović, Belgrade, Serbia

Duchenne and Becker muscular dystrophy (DMD and BMD) are progressive muscle diseases that result from mutations in the dystrophin gene. The dystrophin gene (DMD gene, Xp21.1) is 2.4MB in size and subject to changes the structure. Most common are intragenous deletions (65-70%) of one or more exons, with specific distribution in the gene (exons 2-20 and exons 45-55) and duplication (5-15%), and the rest are small mutations - point mutations, microinsertions, microdeletions, and splice-site mutations. It is estimated that 1/3 of DMD patients have de novo mutation, while in 2/3 of cases the mother is a carrier. The gene diagnosis of DMD/BMD can be made using direct or indirect molecular genetic analysis. The polymerase chain reaction (PCR) method is a direct method that allows detection of about 98% of all deletions detected in the DMD gene. However, this method cannot detect deletions outside the predilection regions of the gene, nor duplication, and is not useful in the detection of female carriers. Multiplex ligation-dependent probe amplification (MLPA) enabled quantitative gene analysis and detection of deletions outside the predilection regions of the gene as well as duplication, both in patients and in the female carrier of mutations, and became a standard in DMD/BMD diagnosis. When these methods do not find deletions and duplications in the dystrophin gene, in order to search for point mutations, the test continues with the DNA sequencing method. However, due to the exceptional size of the gene and the random arrangement of point mutations, the linkage analysis can be applied first as an indirect diagnostic method. It involves monitoring the inheritance of risky chromosomes in males and females in the family, by monitoring polymorphic DNA markers within the DMD gene, or in its surroundings. Method limitations are the existence of non-informative genotypes, recombination in the DMD gene, and it requires the analysis of more family members. The precise diagnosis of affected men and the detection of women who are carriers is important for giving adequate genetic advice and carrying out prenatal diagnosis.

*Key words: dystrophinopathy, diagnosis of dystrophinopathy, carrier detection*



## WII FIT VIRTUELNI PROGRAM TRENINGA U POBOLJŠANJU KONTROLE RAVNOTEŽE TELA DETETA SA DAUNOVIM SINDROMOM – STUDIJA SLUČAJA

Milosav Adamović<sup>\*\*a</sup>, Miodrag Stošljević<sup>a</sup>, Vojislav Todorović<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Osnovna škola „Dušan Dugalić“, Beograd, Srbija

Deca sa Daunovim sindromom kasne u motornom razvoju u odnosu na decu tipične populacije i manifestuju probleme u održavanju ravnoteže tela. Vežbanje putem Wii Fit virtuelnog programa vežbanja može pozitivno da utiče na poboljšanje u održavanju ravnoteže tela. Cilj istraživanja jeste ispitivanje uticaja Wii Fit programa vežbanja na poboljšanje kontrole ravnoteže tela deteta sa Daunovim sindromom. Dete uzrasta 13 godina, muškog pola, sa dijagnozom Daunovog sindroma je tokom perioda tretmana od 8 nedelja, 3 puta nedeljno po pola sata, vežbalo uz pomoć Wii fit programa, igre za stimulaciju ravnoteže („Balance Bubble“, „Penguin Slide“, „Table Tilt“, „Heading“). Detetu je pre i nakon završetka perioda tretmana testirana ravnoteža putem Timed Up and Go Test i Sit To Stand Test-a. Na osnovu dobijenih rezultata istraživanja, utvrđeno je statistički značajno poboljšanje u održavanju ravnoteže tela, tj. brže vreme izvršavanja Timed Up and Go Test ( $p < 0,018$ ) i Sit To Stand Test ( $p < 0,015$ ), a nakon sprovedenog tretmana Wii Fit virtuelnog programa vežbanja u odnosu na prvo merenje, pre početka terapije. Na osnovu dobijenih rezultata istraživanja utvrđeno je da Wii Fit program vežbanja predstavlja efektivan način u poboljšanju ravnoteže tela kod dece sa Daunovim sindromom i može se koristiti u okviru stimulacije motornih sposobnosti kao suportativni oblik defektološkog tretmana.

*Ključne reči: Wii Fit, Daunov sindrom, ravnoteža*

---

<sup>\*\*</sup> milosavadamovic@hotmail.com

## WII FIT VIRTUAL EXERCISE PROGRAMME FOR IMPROVING BODY BALANCE CONTROL IN CHILDREN WITH DOWN SYNDROME – A CASE STUDY

Milosav Adamović<sup>a</sup>, Miodrag Stošljević<sup>a</sup>, Vojislav Todorović<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Elementary School “Dušan Dugalić”, Belgrade, Serbia

Children with Down syndrome are late in developing motor skills compared to children from the wider population, and they manifest issues in maintaining body balance. Exercise using the Wii fit virtual exercise program can have a positive impact on improving the maintenance of body balance. The aim of this paper was to research the effect of Wii fit exercise program on improving the control of body balance in children with Down syndrome. A 13 year old boy with Down syndrome underwent an 8 week therapy, 3x half-hour sessions per week, using the Wii fit program to play games that exercise and stimulate balance (“Balance Bubble”, “Penguin Slide”, “Table Tilt”, “Heading”). The child’s balance was tested before and after the therapy, using the Timed Up and Go Test and the Sit to Stand Test. On the basis of the observed results of the tests, it was established that there was a statistically significant improvement in maintaining body balance, specifically, the time taken to complete Timed Up and Go Test ( $p < 0.018$ ) and Sit To Stand Test ( $p < 0.015$ ) after using the Wii fit virtual exercise program compared to the first measurements, before therapy. On the basis of the observed results of research, it was established that the Wii fit virtual exercise program is an effective method in improving maintenance of body balance in children with Down syndrome, and can be used for the improvement of motor skills as a complementary form of special treatment.

*Key words: Wii Fit, Down syndrome, balance*

## SOMATOSENZORNA STIMULACIJA PRIMENOM UV BOX-A U RADU SA UČENICIMA SA CEREBRALNOM PARALIZOM

Sanja Denić\*\*, Marina Vujanović, Mina Bogdanović Lišančić

Osnovna škola „Miodrag Matić“, Beograd, Srbija

Senzorna integracija, kao neuro-biološki proces i sposobnost svake individue da informacije koje dobija putem čula procesuiru i usmeri ka vršenju svrsishodne i cilju usmerene aktivnosti, kod dece sa cerebralnom paralizom jeste veoma često otežana usled teškoća u percipiranju i obradi informacija dobijenih putem čula, pa je samim tim, neophodna stimulacija čulnih nadržaja kroz različite modalitete. Uređaj, koji se koristi za somatosenzornu stimulaciju učenika sa cerebralnom paralizom i višestrukim smetnjama u razvoju, jeste UV BOX. Osnovni cilj primene UV BOX-a jeste podsticanje razvoja i doprinos adekvatnijem čulnom opažanju stimulacijom vizuelne, taktilne, kinestetičke percepcije kroz zadatke opuštanja i reduciranja grča u ruci i stisnute pozicije šake, stimulacije hvata, zadržavanja i voljnog ispuštanja ponuđenih predmeta, jačanje mišića šake i prstiju, vizuomotornu koordinaciju. Postavljanjem predmeta u određeni ugao UV BOX-a, predmeti dobijaju određenu dubinu i boje koje se bolje percipiraju, a kombinacija i adekvatno doziranje svetlosnih signala omogućava i učenicima sa oštećenjem vida da percipiraju dati predmet. Usmeravanje pažnje i stimulacija analize i uočavanje detalja ponuđenog predmeta kod učenika predstavlja početni korak uvođenja u nastavni proces. Pored stimulacije somatosenzornih sposobnosti, primenom raznih predmeta, kao što su vizuelni snopovi, fluorescentne trake, svetleće lopte, kartica sa slikama predmetima, omogućava se uvođenje u proces savladavanja nastavnog gradiva i usvajanja osnovnih matematičkih pojmova, kao i podsticanje govorno-jezičkog razvoja. Način upotrebe UV BOX-a zavisi od postojećeg znanja deteta, njegovih mogućnosti, ali i od stručnjaka koji rukovodi ovim procesom. Kako su savremena praksa i obrazovni sistem orijentisani ka prilagođavanju vaspitno-obrazovnog procesa sposobnostima učenika, neophodna je primena asistivne tehnologije u svakodnevnom radu sa učenicima sa cerebralnom paralizom i višestrukim smetnjama u razvoju.

*Ključne reči: asistivna tehnologija, nastavni proces, somatosenzorna stimulacija, uv box, čulno opažanje*

---

\*\* ssanjaddenic@gmail.com

## SOMATOSENSORY STIMULATION USING UV BOX IN WORKING WITH STUDENTS WITH CEREBRAL PALSY

Sanja Denić, Marina Vujanović, Mina Bogdanović Lišančić

*Elementary School "Miodrag Matić", Belgrade, Serbia*

Sensory integration, as neurobiological process and ability to process information received through senses and direct them so that targeted activity can be performed, is very often difficult for children with cerebral palsy due to difficulties in processing information obtained through senses, so it is necessary to use sensory stimulation through different modalities. The device that is used for somatosensory stimulation of pupils with cerebral palsy and profound and multiple disabilities is UV BOX. The goal of using UV BOX is to stimulate the development and contribute a more adequate sensory experience by stimulating visual, tactile, kinesthetic perception, through the tasks of relaxing and reducing the spasms in the hand and compressed hand positions, stimulating the grasp, retention and willing release of the offered objects, strengthening the hand and finger muscles, as well as stimulation of visuomotor coordination. By placing an object in a particular corner of the UV BOX, objects get a certain depth and colors that are better perceived, and the right combination and adequate dose of lights also allows pupils with visual impairment to perceive the object. Attention stimulation as well as better detail analysis of offered object for the student is an initial step of the teaching process. In addition to stimulating somatosensory abilities, using various objects such as visual beams, fluorescence strips, luminous balls, different textures, card with picture objects, it also enables the introduction of educational process and adaptation of basic mathematical concepts, as well as stimulating speech-language development. The way to use UV BOX depends on the existing knowledge, abilities, as well as the experts who direct this process. As modern practice and educational system are oriented towards adapting educational process to abilities of students, it is necessary to apply AT in everyday work with students with cerebral palsy and profound and multiple disabilities.

*Key words: assistive technology, teaching process, somatosensory stimulation, uv box, sensory observation*

POREMEĆAJI GOVORA, JEZIKA I  
KOMUNIKACIJE

SPEECH, LANGUAGE AND  
COMMUNICATION DISORDERS

---

## LEKSIČKA OBRADA IMENICA, GLAGOLA I PRIDEVA KOD DECE SA SPECIFIČNIM JEZIČKIM POREMEĆAJEM\*

Bojana Drljan\*\*, Mile Vuković

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

U literaturi je prisutan mali broj studija koje su se bavile istraživanjem leksičke obrade pojedinačnih vrsta sadržajnih reči, kako kod dece sa specifičnim jezičkim poremećajem (SJP) tako i kod dece tipičnog razvoja. Pored toga, rezultati ovih studija su prilično različiti. Cilj ovog istraživanja je bio da se utvrdi sposobnost leksičke obrade imenica, glagola i prideva kod dece sa SJP u poređenju sa decom tipičnog jezičkog razvoja. Uzorak je činilo 115 ispitanika (5-8 god.) podeljenih u dve grupe, 60 ispitanika sa SJP i 55 ispitanika tipičnog razvoja. Za ispitivanje strategije leksičke obrade sadržajnih reči korišćena je adaptirana verzija Testa slobodnih asocijacija reči (50 imenica, 14 glagola i 26 prideva). Distribucija odgovora je pokazala da su i kod dece sa SJP i kod dece tipičnog razvoja, paradigmatički odgovori najviše zastupljeni kod imenica, zatim kod prideva, a najmanje kod glagola. Sintagmatskih odgovora najviše ima u kategoriji glagola, zatim prideva, a najmanje u kategoriji imenica. Pored toga, i u slučaju razvojno nezrelih odgovora uočena je slična distribucija kod obe grupe ispitanika. Poređenjem postignuća rezultati su pokazali da deca sa SJP daju značajno manje razvojno zrelih i značajno više razvojno nezrelih odgovora na planu svih vrsta sadržajnih reči ( $p < 0,05$ ). Deca sa SJP imaju značajno slabije razvijenu leksičko-semantičku mrežu za sve vrste sadržajnih reči u poređenju sa decom tipičnog razvoja. Obe grupe ispitanika najbolje procesuiraju imenice, zatim prideve, dok glagoli predstavljaju vrstu reči koja je najteža za leksičku obradu i deci tipičnog razvoja i deci sa SJP. Možemo zaključiti da deca sa SJP ispoljavaju značajno kašnjenje u razvoju sposobnosti leksičke obrade u svim kategorijama sadržajnih reči, ali da slede sličan obrazac razvoja kao deca tipičnog jezičkog razvoja.

*Ključne reči: leksička obrada, sadržajne reči, specifični jezički poremećaj*

\* Rad je nastao kao rezultat istraživanja na projektu „Evaluacija tretmana stečenih poremećaja govora i jezika“ (br. 179068), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* bojanad77@yahoo.com

## LEXICAL PROCESSING OF NOUNS, VERBS AND ADJECTIVES IN CHILDREN WITH SPECIFIC LANGUAGE IMPAIRMENT\*

Bojana Drljan, Mile Vuković

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

In the literature there is a relative paucity of studies focusing on lexical processing of individual types of content words, both in children with specific language impairment (SLI) and in typically developing children. In addition, the results of these studies are quite different. The aim of this study was to compare lexical processing of nouns, verbs and adjectives of children with SLI and typically developing (TD) children. The sample consisted of 115 participants (5-8 yrs.) divided into two groups, 60 children with SLI and 55 TD children. For the purpose of assessment of lexical processing skills, an adapted version of the Word Association Test (50 nouns, 14 verbs and 26 adjectives) was used. Distribution of associative responses showed that in both SLI and TD children, paradigmatic associations were most frequent in nouns, then in adjectives, and least frequent in verbs. Syntagmatic responses were most common in verbs, then in adjectives, and least common in nouns. In addition, regarding immature types of associations, a similar distribution was observed in both groups. Comparing the achievements of groups, the results showed that children with SLI produced significantly less mature and significantly more immature types of associations within all classes of content words ( $p < 0.05$ ). Children with SLI have significantly less developed lexical-semantic network for all types of content words compared to typically developing children. Both groups of children have better processing skills in the class of nouns than in adjectives, while verbs represent the class of content words that is most difficult for lexical processing for both groups of children. We can conclude that children with SLI have a sparse lexical-semantic network for all classes of content words, but they follow a similar pattern of development as typically developing children.

*Key words: lexical processing, content words, specific language impairment*

---

\* This paper is a result of the project "Treatment Evaluation of Acquired Speech and Language Disorders" (No. 179068), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## FONOLOŠKA SVESNOST KOD DECE SA NEPRAVILNIM IZGOVOROM GLASOVA\*

Slavica Golubović\*\*, Nevena Radivojević\*\*\*, Nevena Ječmenica

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Cilj istraživanja je utvrđivanje fonološke svesnosti kod dece sa nepravilnim izgovorom glasova. Ispitivani uzorak čini 85-oro dece (42 dečaka i 43 devojčice), uzrasta od šest do sedam godina. Za procenu fonološke svesnosti primenjen je Test glasovne analize i sinteze u rečima (Radičević i Marinković, 1993) i Test za procenu fonološke svesnosti-FONT (Subotić, 2011), dok je za procenu artikulacionih sposobnosti primenjen Globalni artikulacioni test (Kostić, Vladislavljević i Popović, 1983). Rezultati istraživanja su pokazali da deca u proseku pravilno izgovaraju 28 glasova srpskog jezika, kao i da su u grupi dece sa nepravilnim izgovorom najučestalije supstitucije (41,2%) i distorzije glasova (26%). Analizom dobijenih rezultata utvrđeno je da su deca postigla najveći uspeh na zadacima prepoznavanja rime (93,6%), slogovne svesnosti (90,1%), analize glasova u rečima (75,4%) i sinteze glasova u rečima od dva sloga (85,3% i 75,3%), dok je najmanji uspeh postignut na zadacima sinteze glasova u rečima od tri i više slogova (33,2%). Daljom analizom rezultata utvrdili smo da su deca sa pravilnim izgovorom glasova bila uspešnija na svim zadacima slogovne svesnosti, sinteze glasova u rečima, kao i eliminacije i supstitucije početnog fonema u odnosu na decu sa nepravilnim izgovorom glasova ( $p < 0,05$ ). Sa druge strane, između dece sa pravilnim izgovorom i dece sa nepravilnim izgovorom nisu utvrđene statistički značajne razlike na zadacima prepoznavanja rime i analize glasova u rečima ( $p > 0,05$ ). Rezultati ovog istraživanja mogu se primeniti u praćenju i proceni tipičnog razvoja, ali i u detekciji poremećaja u cilju poboljšanja u okviru sposobnosti pravilnog izgovora i fonoloških sposobnosti.

*Ključne reči: slogovna svesnost, prepoznavanje rime, analiza glasova, sinteza glasova, fonološke sposobnosti*

\* Rad je nastao kao rezultat istraživanja na projektu „Interdisciplinarna istraživanja kvaliteta verbalne komunikacije“ (br. 178027), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* slavica.golubovic@yahoo.com

\*\*\* Student master akademskih studija



## PHONOLOGICAL AWARENESS IN CHILDREN WITH IRREGULAR PRONUNCIATION OF PHONEMES\*

Slavica Golubović, Nevena Radivojević\*\*\*, Nevena Ječmenica

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

The aim of this research was to determine phonological awareness in children with irregular pronunciation of phonemes. Our sample consisted of 85 children (42 boys and 43 girls), six to seven years of age. For the assessment of phonological awareness, the Test of phoneme analysis and synthesis in words (Radičević and Marinković, 1993) and Test for the assessment of phonological awareness-FONT (Subotić, 2011) were applied, while the Global articulation test was applied for the evaluation of articulation abilities (Kostić, Vladislavljević and Popović, 1983). The results showed that children on average correctly pronounced 28 phonemes of the Serbian language, and that in the group of children with irregular pronunciation of phonemes, substitutions (41.2%) and distortions of phonemes (26%) were the most frequent. The analysis of the results showed that children achieved the greatest success in rhymes recognition (93.6%), syllable awareness (90.1%), analysis of phonemes in words (75.4%) and synthesis of phonemes in two-syllable words tasks (85.3% and 75.3%) while the lowest success was achieved in synthesis of phonemes in three or more-syllable words task (33.2%). Further analysis of the results showed that children with correct pronunciation of phonemes were more successful in all tasks of syllable awareness, phoneme synthesis in words, and elimination and substitution of the initial phoneme tasks compared to children with irregular pronunciation of phonemes ( $p < 0.05$ ). On the other hand, among children with correct pronunciation and children with irregular pronunciation, statistically significant differences in rhyme recognition and phoneme analysis in words ( $p > 0.05$ ) were not found. The results of this research can be applied in monitoring and evaluation of typical development, but also in detection of disorders in order to improve ability of correct pronunciation and phonological abilities.

*Key words: syllable awareness, rhyme recognition, phoneme analysis, phoneme synthesis, phonological abilities*

---

\* This paper is a result of the project "Interdisciplinary Research on the Quality of Verbal Communication" (No. 178027), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

\*\*\* Student of master studies

## METALINGVISTIČKA SVESNOST DECE SA SMETNJAMA U ČITANJU

Gordana Čolić\*\*

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Metalingvistička ili metajezička svesnost se definiše kao sposobnost da se razmišlja o jeziku i manipuliše njegovim strukturnim karakteristikama. Uglavnom se izdvajaju četiri vida metalingvističke svesnosti: svest o glasovnoj strukturi reči, svest o rečima, sintaksička svest i pragmatička svest. Cilj istraživanja je da se ispita fonološka svesnost i sintaksička svesnost dece sa smetnjama u čitanju. U ovom istraživanju, u prvoj fazi, ispitane su fonološka i sintaksička svesnost kod 200 dece predškolskog uzrasta. Za ispitivanje fonološke svesnosti primenjen je ELLA test, dok je sintaksička svesnost ispitana pomoću Liste eksperimentalnih zadataka za ispitivanje znanja o sintaksi. Kod iste dece je na kraju prvog razreda, druga faza istraživanja, ispitano čitanje pomoću Trodimenzionalnog testa čitanja. Na osnovu kriterijuma diskrepance (1,5 standardna devijacija) između čitanja i IQ utvrđenim testom Ravenove progresivne matrice u boji iz ukupnog uzorka izdvojena je grupa dece sa smetnjama u čitanju. Na osnovu rezultata analize t testom je utvrđeno da između dece sa smetnjama u čitanju i dece koja nisu ispoljila smetnje u čitanju postoje statistički značajne razlike na svim merama fonološke svesnosti, a da su najznačajnije na zadacima segmentacije reči na slogove ( $t = 3,662$ ;  $df = 173$ ;  $p < 0,000$ ). Između dve grupe dece razlike su utvrđene i na svim merama sintaksičke svesnosti, s tim da su najznačajnije na zadacima kojima se ispituje svesnost o rečenicama sa nepravilnom/pravilnom upotrebom enklitika ( $t = 3,709$ ;  $df = 173$ ;  $p < 0,000$ ). Rezultati istraživanja upućuju na zaključak da razvijenija fonološka i sintaksička svesnost doprinose većem uspehu u čitanju i obrnuto.

*Ključne reči: fonološka svesnost, sintaksička svesnost, čitanje*

---

\*\* gordana.colic22@gmail.com

## METALINGUISTIC AWARENESS OF CHILDREN WITH READING DISORDERS

Gordana Čolić

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Metalinguistic awareness is defined as an ability to reflect on language and manipulate its structural characteristics. Four types of metalinguistic awareness can mostly be classified: awareness of a phonological structure of words, awareness of words, syntactic awareness and pragmatic awareness. The aim of the research was to examine the phonological awareness and the syntactical awareness of children with reading disorders. In the first phase of this research, phonological and syntactic awareness of 200 pre-school children were examined. ELLA test was applied for examining phonological awareness, while syntactic awareness was examined by using the list of experimental tasks aimed at testing the knowledge of syntax. In the second phase of the research, the same children's reading was tested at the end of their first grade by using the Three-dimensional Reading Test. Based on the discrepancy criterion (1.5 standard deviation) between reading and IQ, a Raven Progressive Color Matrix test from a total sample distinguished a group of children with reading disabilities. Based on the t-test analysis of the results, it was established that between the children with reading disorders and those who did not express any reading disorders there were some statistically significant differences among all phonological awareness measures, while the most significant differences were in the tasks of syllable segmentation ( $t = 3.662$ ;  $df = 173$ ;  $p < 0.000$ ). Differences between the two groups of children were also established in all measures of syntactic awareness, and the most significant ones were established in the tasks examining awareness of sentences with (ir)regular use of enclitics ( $t = 3.709$ ;  $df = 173$ ;  $p < 0.000$ ). The research results indicate that developed phonological awareness and syntactic awareness contribute to more successful reading and vice versa.

*Key words: phonological awareness, syntactic awareness, reading*

## LATERALIZOVANOST I BIOELEKTRIČNA AKTIVNOST MOZGA KAO MOGUĆI POKAZATELJI MUCANJA KOD DECE

Jadranka Otašević\*\*

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Mucanje je funkcionalna disharmonija svesti, mišljenja, emocija i vrednosti koje se ispoljavaju kao zvučna disharmonija ritma i intenziteta. Ono kao poremećaj komunikacije direktno utiče na adaptivno ljudsko ponašanje. Pri ovom poremećaju komunikacije izmenjena je tačnost govora, njegov ritam, intenzitet, frekvencija, emocionalna boja a time i govor u celini. Prema najnovijim saznanjima postoji preko stotinu različitih teorija o nastanku mucanja što govori u prilog činjenici da ovo jeste jako složen problem. Do danas ne postoji usklađeno mišljenje o razlozima nastanka mucanja. Cilj ovog istraživanja bio je ispitati mogući uticaj lateralizovanosti - uspostavljanja dominantne hemisfere i izmenjene bioelektrične aktivnosti mozga na pojavu mucanja kod dece. U istraživanju je učestvovalo 60-oro dece, uzrasta od 5 do 7 godina. Njih 30 su bila deca koja mucaju i oni su činili eksperimentalnu grupu, a 30-oro dece su bili fluentni govornici i oni su bili kontrolna grupa. Kao instrument je korišćen Test za procenu lateralizovanosti i elektroencefalografski nalaz (EEG). Auditivna lateralizovanost je bila lošija kod ispitanika koji mucaju ( $p = 0,003$ ), a 40% ispitanika je imalo neizdiferenciranu auditivnu lateralizovanost. Gestualna lateralizovanost ruke ispitanika koji mucaju je značajno lošija ( $p = 0,002$ ). Analizom Elektroencefalografskog nalaza, kod 31,82% ispitanika koji mucaju, uočene su specifične promene u EEG nalazu. Promene u električnoj aktivnosti mozga, kod 85,71% ispitanika koji mucaju, registrovane su bilateralno, a izolovano u desnoj hemisferi kod 14,29% ispitanika. Postoje izvesne promene u diferenciranju lateralizovanosti kod dece koja mucaju, a kod određenog broja ove dece se registruju i specifične promene u EEG nalazu.

*Ključne reči: mucanje, lateralizovanost, EEG nalaz*

---

\*\* jadrankastevovic@yahoo.com

## LATERALITY AND BIOELECTRIC BRAIN ACTIVITY AS POSSIBLE INDICATORS OF STUTTERING IN CHILDREN

Jadranka Otašević

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Stuttering is a functional disharmony of consciousness, thoughts, emotions and values which manifest sound disharmony of rhythm and intensity. As a disorder of communication, it directly affects adaptive human behavior. The accuracy of speech, its rhythm, intensity, frequency and emotional mark are changed, and thus the speech in its entirety. According to the latest findings there are over a hundred different theories about the origin of stuttering, which confirms the fact that this is a very complex problem. Until today there has been no consensus about the reasons of occurrence of stuttering. The aim of this research was to examine the possible influence of laterality as well as considerable influence of hemisphere dominance and specific brain activity on the occurrence of stuttering in children. Sixty children, aged 5 to 7, participated in this research. Thirty children suffered from stuttering and they were the experimental group, while thirty children were fluent speakers and they were the control group. Laterality assessment test was used as an instrument as well as electroencephalographic finding. Auditory laterality was considerably worse in the examinees who stuttered ( $p = 0.003$ ), and 40% of examinees had undifferentiated auditory laterality. Gestural hand-use laterality in the stuttering examinees was considerably worse ( $p = 0.002$ ). By the analysis of electroencephalographic findings, the specific changes were noticed in EEG finding in 31.82% of the stuttering examinees. The changes in electrical brain activity in 85.71% of the stuttering examinees were registered bilaterally, while in 14.29% examinees they were isolated in the right hemisphere. There are certain changes in the differentiation of laterality in children who stutter, while in a certain number of these children specific changes in EEG finding have been registered as well.

*Key words: stuttering, laterality, EEG finding*

## CORRELATION BETWEEN JOINT ATTENTION AND LANGUAGE DEVELOPMENT BEFORE AND AFTER VOCABULARY SUPPORT

Monika Rosandić\*\*, Sanja Šimleša, Jasmina Ivšac Pavliša

*University of Zagreb – Faculty of Education and Rehabilitation Sciences, Centre for Rehabilitation, Zagreb, Croatia*

Joint attention, the ability to coordinate visual attention between two persons and objects or events, is developing intensively at the age of 9 to 18 months. The evidence suggests that episodes of joint attention support the acquiring of early vocabulary and have a greater role in learning the first words than the later vocabulary development, when other strategies for extending the vocabulary begin to dominate. It is well known that the characteristics of joint attention change dramatically when children adopt 50 words of expressive vocabulary. This stage of development is seen as an indicator that the word learning process has started to accelerate and that a two-year-old child should not be considered a “late talker”. Although the categories of joint attention are related to language development, the forms largely related to language development are insufficiently explored. Also, it is still unclear how joint attention changes after the vocabulary spurt stage. The aim of this paper is to examine the correlation between the categories of joint attention and related forms with receptive and expressive vocabulary and to define the differences in the correlation of joint attention and language development before and after the vocabulary spurt stage. The study will be conducted with twenty-two typically developing children at the age of 12 to 24 months. Half of them (N = 10) will be in the phase before the vocabulary spurt, and another half (N = 10) will have entered the phase. Joint attention skills will be observed through a video of a semi-structured play between parent and child. The results will be analyzed by non-parametric statistical methods and will be interpreted from the perspective of social-pragmatic theories of the development of joint attention and language.

*Key words: joint attention, expressive vocabulary, receptive vocabulary*

---

\*\* monika.rosandic@gmail.com

## KVALITET KOMUNIKACIJE OSOBA SA SPASTIČNOM DIZARTRIJOM

Nadica Jovanović Simić<sup>\*\*a</sup>, Ivana Arsenić<sup>a</sup>, Bojana Drljan<sup>a</sup>, Tanja Milovanović<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Klinika za rehabilitaciju „Dr Miroslav Zotović“, Beograd, Srbija

Spastična dizartrija nastaje usled povećanog tonusa mišića i smanjenja opsega voljnih pokreta mišića koji učestvuju u govornoj produkciji. Osnovne karakteristike govora osoba sa spastičnom dizartrijom su: neprecizna artikulacija, napeta fonacija, hrapav glas, jednolična visina glasa, hipernazalanost i izrazito spor govor. Navedene karakteristike utiču na razumljivost govora kao i kvalitet komunikacije koju ostvaruju ove osobe. Cilj istraživanja se odnosio na utvrđivanje kvaliteta komunikacije osoba sa spastičnom dizartrijom. Ispitanici su sami vrednovali uticaj govornog poremećaja na različite komunikacione situacije. U istraživanju je učestvovao 31 ispitanik sa spastičnom dizartrijom, od čega 17 osoba muškog i 14 osoba ženskog pola, starosti od 22 do 83 godine (AS = 63). Ispitanici su imali zadatak da odgovore na 30 pitanja skale pod nazivom „Indeks glasovnog oštećenja“, a koja se sastoji iz tri subskale: fizičke, emocionalne i funkcionalne. Rezultati celokupne skale su pokazali da blag poremećaj ima 48,4% ispitanika, umeren 22,6% i težak 29,0% ispitanika. Na funkcionalnoj subskali 48,4% ispitanika smatra da ima blag poremećaj, dok 51,6% smatra da ima težak poremećaj. Nije bilo ispitanika koji su na ovoj subskali svoj poremećaj vrednovali kao umeren. Blag poremećaj na fizičkoj subskali zabeležen je kod 54,8% ispitanika, umeren kod 12,9% i težak kod 32,3% ispitanika. Na emocionalnoj subskali 58,1% ispitanika smatralo je da ima blag poremećaj, 16,1% umeren i 25,8% ispitanika težak poremećaj. Potrebno je istaći da su dobijene vrednosti na osnovu samoprocene pacijenata sa spastičnom dizartrijom veoma korisne za sprovođenje adekvatnog tretmana, kao i evaluaciju tretmana i da ti podaci omogućavaju da se utvrdi uticaj poremećaja glasa i govora na svakodnevno komunikaciono funkcionisanje.

*Ključne reči: spastična dizartrija, samoprocena, kvalitet komunikacije*

---

\*\* nadicaj58@gmail.com

## QUALITY OF COMMUNICATION IN PEOPLE WITH A SPASTIC DYSARTHRIA

Nadica Jovanović Simić<sup>a</sup>, Ivana Arsenić<sup>a</sup>, Bojana Drljan<sup>a</sup>, Tanja Milovanović<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Clinic for Rehabilitation “Dr Miroslav Zotović”, Belgrade, Serbia

Spastic dysarthria is caused by increased muscle tone and limited range of the voluntary muscles movements engaged in speech production. Most prominent perceptible speech deviations associated with spastic dysarthria are: inaccurate speech production of consonants, distorted vowels, monopitch, reduced stress, harsh voice quality, monoloudness, hypernasality and slow speech rate. These characteristics can affect the intelligibility of speech and the quality of communication of these people. The aim of this study was to determine the quality of communication in people with spastic dysarthria. The participants themselves evaluated the impact of speech disorder on different communicative situations. The sample consisted of 31 participants with spastic dysarthria, 17 men and 14 women, 22 to 83 years of age ( $M = 63$ ). The participants had to complete the task of answering 30 questions within the scale “Voice Handicap Index”. The scale consists of three subscales: physical, emotional and functional. The overall scale scores showed that 48.4% participants had mild, 22.6% moderate, while 29.0% of participants had a severe form communication impairment. Functional subscale scores showed that 48.4% of participants had a mild form of impairment, while 51.6% of participants had a severe form of impairment. In the physical domain of the scale, a mild form of impairment was observed in 54.8%, moderate in 12.9% and severe in 32.3% of participants. Scores on emotional subscale showed that 58.1% of participants considered that they had a mild impairment, 16.1% moderate and 25.8% of participants thought that they had severe impairment in emotional domain. It should be pointed out that the obtained values based on the self-assessment of patients with spastic dysarthria are very useful for the implementation of adequate treatment techniques, as well as for treatment evaluation, and that these data enable the determination of voice and speech disorder influence on communication in daily life.

*Key words: spastic dysarthria, self-assessment, quality of communication*



## PRISUSTVO TREMORA U GLASU ODRASLIH OSOBA SA HIPOKINETIČKOM DIZARTRIJOM

Ivana Arsenić\*\*, Nadica Jovanović Simić, Mirjana Petrović Lazić, Ivana Šehović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Hipokinetička dizartrija se najčešće dijagnostikuje u populaciji osoba sa Parkinsonovom bolešću. Pojave koje prate ovu bolest kao što su tremor, bradikinezije, rigiditet i posturalne abnormalnosti utiču na procese respiracije, fonacije i artikulacije. Navedene promene narušavaju govornu produkciju i mogu se akustički izmeriti. Cilj istraživanja se odnosio na utvrđivanje prisustva patološkog tremora u glasu osoba sa hipokinetičkom dizartrijom. Uzorak je činilo 30 ispitanika sa Parkinsonovom bolešću. Ispitanici su bili oba pola (11 muškaraca i 19 žena) uzrasta od 59 do 94 godine (AS = 82). Svaki ispitanik je sniman diktafonom prilikom neprekidne fonacije vokala /A/. Analizirani su akustički parametri koji mere prisustvo tremora u glasu (Fftr, Fatr, FTRI, ATRI). Analiza je rađena posebno za osobe muškog i posebno za osobe ženskog pola. Rezultati su pokazali prisustvo patološkog tremora u glasu ispitanika sa hipokinetičkom dizartrijom. Patološki tremor u glasu se javlja usled nevoljnih i ritmičnih oscilatornih pokreta vokalnog trakta koji dovode do pojave ritmičnih fluktuacija fundamentalne frekvencije i amplitude glasa. Vrednosti parametara Fftr i Fatr kod ispitanika muškog pola nisu statistički značajno odstupale od istih vrednosti kod tipičnih govornika muškog pola, dok su vrednosti parametara FTRI i ATRI značajno statistički odstupale od normi koje važe za tipične govornike. Sa druge strane, kod osoba ženskog pola iz uzorka, statistički značajna razlika je postojala za sva četiri izmerena parametra u poređenju sa normama koje važe za tipične govornike ženskog pola. Prednost akustičke analize je ta što predstavlja objektivnu i neinvazivnu metodu procene. Pokazala se kao veoma korisna metoda u proceni prisustva patološkog glasa kod osoba sa govornim poremećajima. Takođe, omogućava utvrđivanje razlika u govornim karakteristikama zdravih osoba i osoba sa neurološkim oštećenjima, a navodi se i da olakšava dijagnostikovanje prvih simptoma Parkinsonove bolesti.

*Ključne reči: hipokinetička dizartrija, akustička analiza, tremor*

---

\*\* ivana.arsenic@yahoo.com

## PRESENCE OF VOICE TREMOR IN ADULTS WITH HYPOKINETIC DYSARTHRIA

Ivana Arsenić, Nadica Jovanović Simić, Mirjana Petrović Lazić, Ivana Šehović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Hypokinetic dysarthria is usually diagnosed in people with Parkinson's disease. Clinical symptoms of this disease, such as tremor, bradykinesia, rigidity and postural abnormalities, affect the processes of respiration, phonation and articulation. These changes can impair speech production and can be acoustically measured. The aim of this study was to determine the presence of pathological voice tremor in patients with hypokinetic dysarthria using acoustic voice analysis. The sample consisted of 11 male and 19 female participants, 59 to 96 years of age ( $M = 82$ ). Voice sample of each participant was recorded during sustained phonation of vowel /A/. Voice tremor parameters (Fftr, Fatr, FTRI, ATRI) were analyzed. Given the gender differences in the values of acoustic parameters, the analysis was conducted separately for men and women. The results showed the presence of pathological voice tremor in participants with hypokinetic dysarthria. Pathological tremor in voice occurs due to involuntary and rhythmic oscillatory movements of vocal tract that cause rhythmic fluctuations of the fundamental frequency and amplitude. In men, values of parameters Fftr and Fatr did not differ significantly from norms in typical population. However, values of FTRI and ATRI parameters differ significantly from male norms in typical population. On the other hand, all observed parameters in women significantly differ from norms in typical population. The benefit of acoustic analysis is that it provides objective data and it is a non-invasive method of assessment, proved to be very useful in assessing pathological voice in people with speech impairments. Also, it is useful in determining the speech differences between healthy individuals and those with neurological impairments, as well as in early diagnosis of Parkinson's disease.

*Key words: hypokinetic dysarthria, acoustic analysis, tremor*

## KVALITET ŽIVOTA OSOBA SA NEFLUENTNIM AFAZIJAMA\*

Željana Sukur\*\*<sup>a</sup>, Mile Vuković<sup>b</sup>

<sup>a</sup>Zavod za psihofiziološke poremećaje i govornu patologiju „Prof. dr Cvetko Brajović“, Beograd, Srbija

<sup>b</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Budući da afazija dovodi do brojnih posledica na psihosocijalnom planu, poslednjih godina se velika pažnja poklanja proučavanju kvaliteta života pogođenih osoba. Cilj ovog rada je utvrđivanje kvaliteta života osoba s nefluentnim afazijama. Uzorak se sastojao od 30 ispitanika, od kojih je 15 imalo Brokinu, a 15 transkortikalnu motornu afaziju. U uzorak su uključeni ispitanici s afazijom vaskularne etiologije kod kojih je prošlo najmanje dva meseca od momenta nastanka cerebrovaskularnog insulta. Kontrolnu grupu činilo je 30 ispitanika bez neurološkog i psihijatrijskog poremećaja, urednih govorno-jezičkih funkcija. U istraživanju je primenjena Skala za merenje kvaliteta života specifičnog za afaziju (Stroke and Aphasia Quality of Life Scale-39 – SAQOL-39). U statističkoj obradi podataka primenjen je Man-Vitni U-test. Rezulati su pokazali da su ispitanici s afazijom imali statistički značajno niži ukupni skor, kao i značajno niža postignuća na pojedinačnim domenima SAQOL-39 u poređenju sa kontrolnom grupom ( $p < 0,001$ ). Na osnovu ukupne analize dobijenih rezultata, zaključeno je da ispitanici sa nefluentnim afazijama imaju značajno narušen kvalitet života.

*Ključne reči: kvalitet života, Brokina afazija, transkortikalna motorna afazija*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Evaluacija tretmana stečenih poremećaja govora i jezika“ (br. 179068), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* zeljanasukur@gmail.com

## QUALITY OF LIFE OF PERSONS WITH NONFLUENT APHASIA\*

Željana Sukur<sup>a</sup>, Mile Vuković<sup>b</sup>

<sup>a</sup>Institute for Psychophysiological Disorders and Speech Pathology “Prof. Cvetko Brajović”, Belgrade, Serbia

<sup>b</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

Since aphasia leads to numerous consequences on the psychosocial plan, in recent years great attention has been paid to the study of the quality of life of the affected persons. The aim of this study is to determine the quality of life of people with nonfluent aphasia. The sample consisted of 30 participants, 15 of whom had Broca’s and 15 transcortical motor aphasia. The sample included participants with aphasia of vascular etiology, at least two months after the occurrence of a stroke. The control group consisted of 30 participants with no neurological or psychiatric disorders and with normal speech and language functions. In this study, the Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) was used. Mann-Whitney U-test was applied in statistical data processing. The results showed that participants with aphasia had a statistically significantly lower total score, as well as significantly lower achievements in the individual domains of SAQOL-39 compared to the control group ( $p < 0.001$ ). Based on the overall analysis of the obtained results, it was concluded that participants with nonfluent aphasia had a significantly impaired quality of life.

*Key words: quality of life, Broca’s aphasia, transcortical motor aphasia*

---

\* This paper is a result of the project “Treatment Evaluation of Acquired Speech and Language Disorders” (No. 179068), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## SPEKTROGRAFSKA ANALIZA VOKALA KOD LARINGEKTOMIRANIH BOLESNIKA\*

Mirjana Petrović Lazić\*\*, Ivana Šehović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Spektrografska analiza govora je pouzdana metoda koja omogućava izdvajanje kvantitativnih parametara glasa. Primenjena je u ovom radu za poređenje različitih oblika komunikacije kod laringektomiranih bolesnika. Cilj istraživanja je da se utvrdi povezanost između parametara spektralne analize i razumljivosti govora kod laringektomiranih bolesnika, kao i uticaj ovih parametara na stepen razumljivosti govora. Uzorkom je obuhvaćeno 125 laringektomiranih pacijenata oba pola, starosti od 48 do 85 godina. Spektrografska analiza sprovedena je primenom kompjuterizovane Laboratorije za ispitivanje glasa i govora "Kay Elemetrics" korporacije, model 4300. U radu je korišćen „Balansirani tekst“ za analizu govora i glasa. U statističkoj obradi podataka korišćena je deskriptivna statistika. Razlike su testirane jednofaktorskom analizom varijanse (ANOVA) i t testom za velike nezavisne uzorke, kao i t testom za jedan uzorak. Povezanost je ispitana Pirsonovim koeficijentom korelacije. Univarijantna linearna regresiona analiza korišćena je za utvrđivanje uticaja prediktora na zavisnu varijablu. Utvrđena je samo jedna statistički značajna povezanost parametra IF2 ( $r = -0,406$ ,  $p = 0,009$ ) sa ocenom na Testu razumljivosti govora kod ezofagealnih pacijenata i jedna statistički značajna povezanost parametra IF2 ( $r = 0,353$ ,  $p = 0,025$ ) sa ocenom na Testu razumljivosti govora kod pacijenata koji koriste elektrolarinks. Rezultati regresione analize su pokazali da je varijabla IF2 statistički značajni prediktor rezultata na Testu razumljivosti kod ezofagealnih pacijenata, objašnjavajući 14% varijanse ( $Beta = -0,406$ ,  $p = 0,009$ ). U grupi pacijenata koji koriste elektrolarinks varijabla IF2 je statistički značajna u predikciji rezultata na Testu razumljivosti, objašnjavajući 10% varijanse ( $Beta = 0,353$ ,  $p = 0,025$ ).

*Ključne reči: glas, laringektomija, spektrografija*

\* Rad je nastao kao rezultat istraživanja na projektu „Evaluacija tretmana stečenih poremećaja govora i jezika“ (br. 179068), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* carica@rcub.bg.ac.rs

## SPECTROGRAPHIC ANALYSIS OF VOWELS IN LARYNGECTOMY PATIENTS\*

Mirjana Petrović Lazić, Ivana Šehović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Spectrographic analysis of speech is a reliable method which enables deriving quantitative parameters of voice. In this study, it was used for comparing different forms of communication in laryngectomy patients. The aim of the research was to determine the connection between parameters of spectral analysis and speech understanding in laryngectomy patients, as well as the impact of these parameters on the degree of speech understanding. The study sample included 125 laryngectomy patients of both genders, 48 to 85 years of age. Spectrographic analysis was carried out by implementing the computerized Laboratory for examining voice and speech of “Kay Elemetrics Corporation”, model 4300. The “Balanced text” for the analysis of speech and voice was used in this study. In statistical data processing, the descriptive statistics was used. The differences were tested by the single factor Analysis of Variance (ANOVA) and by the independent sample t test, and also by a single sample t test. The connection was examined by Pearson correlation coefficient. Univariate linear regression analysis was used for determining the influence of the predictor on the dependent variable. Only one significant connection of the parameter IF2 ( $r = -0.406$ ,  $p = 0.009$ ) with speech understanding test assessment was determined in esophageal patients, and one statistically significant connection of the parameter IF2 ( $r = 0.353$ ,  $p = 0.025$ ) with the speech understanding test assessment in patients who use electrolarynx. The results of the regression analysis showed that the variable IF2 was a statistically significant predictor of the Understanding test results in esophageal patients, explaining 14% of the variance ( $Beta = -0.406$ ,  $p = 0.009$ ). In a group of patients who used electrolarynx, the variable IF2 was statistically significant in the prediction of the Understanding test, explaining 10% of the variance ( $Beta = 0.353$ ,  $p = 0.025$ ).

*Key words: voice, laryngectomy, spectrography*

---

\* This paper is a result of the project “Treatment Evaluation of Acquired Speech and Language Disorders” (No. 179068), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## SPOSOBNOST ZA RAZUMEVANJE IDIOMA KOD STARIH OSOBA

Maja Ivanović\*\*

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

U jeziku postoje ustaljeni izrazi koji se sastoje od dve ili više reči. Oni imaju jedinstveno značenje koje se ne može izvesti na osnovu značenja pojedinačnih reči od kojih su sastavljeni. Jedinice sa takvim statusom u leksikonu jednog jezika zovu se frazemi ili idiomi. S obzirom na frekvencu njihove upotrebe, razumevanje idioma je od velikog značaja za uspešnu komunikaciju. Cilj rada je bio da se ispita sposobnost za razumevanje idioma kod starih osoba budući da radovi stranih autora posvećeni ovom pitanju ne ukazuju nedvosmisleno da li ova sposobnost opada sa godinama. Razumevanje idioma je procenjivano na osnovu definisanja značenja svakog od 10 ponuđenih idiomatskih izraza i navođenjem komunikativne situacije u kojoj bi se dati idiom mogao upotrebiti. Istraživanjem je obuhvaćeno 28 ispitanika od 70 do 90 godina. Za predstavljanje podataka korišćena je deskriptivna statistika (aritmetička sredina, standardna devijacija, minimalne i maksimalne vrednosti). Dobijeni rezultati su pokazali da ispitivana sposobnost ne opada u poznim godinama, ali je utvrđeno da nivo razumevanja idioma zavisi od stepena izloženosti idiomima tj. od prethodnog iskustva govornika, kao i od stepena semantičke prozirnosti samog izraza. Rezultati su utoliko dragoceniji jer se odnose na ispitivanje kasnijeg jezičkog razvoja izvornih govornika srpskog jezika, te pored teorijskog mogu imati i praktični značaj prilikom usvajanja sintaksičkih i semantičkih svojstava pojedinačnih leksema i izraza, kao i u radu sa decom kod koje su uočeni različiti oblici razvojnih jezičkih poremećaja.

*Ključne reči: kasniji jezički razvoj, idiomi, semantika, sintaksa*

---

\*\* majapivanovic@gmail.com

## IDIOM UNDERSTANDING IN OLDER ADULTS

Maja Ivanović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

There are certain expressions in language consisting of two or more words. They have a unique meaning that cannot be derived on the basis of the meanings of individual words from which they are composed. Units with such status in the lexicon are called phrases or idioms. Given the frequency of their use, understanding idioms is of great importance for successful communication. The aim of this paper was to examine idiom understanding in older adults, since the works of many authors devoted to this issue do not indicate whether this ability has been declining over the years. Idiom understanding was assessed on defining the meaning of each of 10 idiomatic expressions and giving the situation in which the idiom could be used. The study included 28 subjects from 70 to 90 years of age. Descriptive statistics (arithmetic mean, standard deviation, minimum and maximum values) were used to represent the data. The obtained results showed that the tested ability did not decrease in the late years, but it was found that idiom understanding depended on the degree of exposure to idioms, as well as on the degree of semantic transparency of the expression itself. The results are even more valuable because they relate to the examination of the later language development of the native speakers of Serbian language, and they can be used in acquisition of syntactic and semantic properties of individual lexemes and expressions, as well as in working with children with various forms of developmental language disorders.

*Key words: later language development, idioms, syntax, semantics*



## ETIOPATOGENETSKI ASPEKTI ALERGIJSKOG FUNGALNOG RINOSINUZITISA

Vladan Milutinović<sup>\*\*</sup>,<sup>a,b</sup>, Snežana Babac<sup>a,c</sup>

<sup>a</sup>Klinika za otorinolaringologiju Kliničko-bolničkog centra „Zvezdara“, Beograd, Srbija

<sup>b</sup>Univerzitet u Beogradu – Stomatološki fakultet, Beograd, Srbija

<sup>c</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Alergijski fungalni rinosinuzitis (AFRS) predstavlja značajan entitet hronične invazivne forme fungalnih rinosinuzitisa. Uprkos mnogobrojnim istraživanjima, etiologija, patofiziologija i lečenje ovog oboljenja nisu u potpunosti jasni i ostaju predmet diskusije. Bolest se odlikuje preosetljivošću na fungalne antigene, hroničnim sinuzitisom koji je u većini slučajeva praćen polipozom, eozinofilnim mucinom, prisustvom gljivica i karakterističnim nalazom kompjuterizovane tomografije (CT). Cilj rada je bio da se pregledom savremene literature sagleda etiopatogeneza AFRS-a. Kao glavni mehanizam u nastanku oboljenja navodi se stvaranje IgE anti tela po tipu i alergijske preosetljivosti i imunih kompleksa po tipu III mada je i reakcija na nivou Th1 i Th2 limfocita u fokusu istraživanja. Prvi mehanizam se zasniva na tome da prilikom normalne nazalne respiracije dolazi do kontakta sa antigenom gljivica, a kod atopičara započinje antigena stimulacija alergijske reakcije. Kao posledica dolazi do stvaranja IgE po tipu I alergijske preosetljivosti i imunih kompleksa po tipu III. Drugi koncept je baziran na saznanju da je kod osoba sa CRS prisutan preterani humoralni i celularni imuni odgovor Th1 i Th2 tipa od strane perifernih mononukleara nakon izloženosti fungalnim antigenima, naročito familije *Alternaria*. Th1 i Th2 limfociti luče citokine IL-5, IL-13 i IFN- $\gamma$  koji podstiču eozinofilnu inflamaciju. Na osnovu dosadašnjih iskustava, terapijska metoda izbora je endoskopska sinusna hirurgija, u kombinaciji sa kombinovanom imuno modulatornom terapijom u cilju adekvatne kontrole bolesti. Dalja istraživanja su neophodna za kompletno razumevanje patofiziologije oboljenja u pravcu razumevanja kompleksnih interakcija na nivou humoralnog i celularnog imunog odgovora. Samo adekvatno razumevanje etiopatogenetskih aspekata otvara nove mogućnosti za razvoj efikasne i kauzalne terapije.

*Ključne reči: Alergijski fungalni rinosinuzitis, imuni odgovor, endoskopska sinusna hirurgija, imuno modulatorna terapija*

<sup>\*\*</sup> milutinovic.vladann@gmail.com

## ETHIOPATHOGENETIC ASPECTS OF ALLERGIC FUNGAL RHINOSINUSITIS

Vladan Milutinović<sup>a,b</sup>, Snežana Babac<sup>a,c</sup>

<sup>a</sup>ENT Clinic, Clinical and Hospital Centre “Zvezdara”, Belgrade, Serbia

<sup>b</sup>University of Belgrade – Faculty of Dental Medicine, Belgrade, Serbia

<sup>c</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

Allergic fungal rhinosinusitis (AFRS) is an important entity of chronic non-invasive form of fungal rhinosinusitis. Despite numerous studies, etiology, pathophysiology and treatment of this disease are not fully understood and remain a subject of discussion. The disease is characterized by hypersensitivity to fungal antigens, chronic sinusitis which in most cases is accompanied by polyps, eosinophilic mucin, the presence of fungi and characteristic findings of computed tomography (CT). The aim of the study was to review the up to date literature on the etiopathogenesis of AFRS. The main mechanism in the onset of the disease is the creation of IgE antibody by type and allergic hypersensitivity and immune complexes (type III allergic reaction), although, reaction of Th1 and Th2 lymphocytes is also in focus of researchers in many studies. The first mechanism is based on the fact that during normal nasal respiration there is contact with the antigen of the fungus and in the atopic person the antigen begins to stimulate the allergic reaction. As a result, the formation of IgE starts according to type I allergic hypersensitivity and immune complexes according to type III. The second concept is based on the knowledge that a person with CRS has an excessive humoral and cellular immune response of Th1 and Th2 type by peripheral mononuclears after exposure to fungal antigens, in particular the *Alternaria* family. Th1 and Th2 lymphocytes start the secretion of cytokines of IL-5, IL-13 and IFN- $\gamma$  that stimulate eosinophilic inflammation. Based on previous experience, the therapeutic method of choice is endoscopic sinus surgery, combined with combined immunomodulatory therapy for the purpose of adequate control of the disease. Further research is necessary for a complete understanding of pathophysiology of the disease in order to understand complex interactions at the level of humoral and cellular immune responses. Only an adequate understanding of the etiopathogenetic aspects opens up new opportunities for the development of effective and causal therapy.

*Key words: Allergic fungal rhinosinusitis, immune response, endoscopic sinus surgery, immunomodulatory therapy*

# KOMPARATIVNA ANALIZA POREMEĆAJA ČITANJA KOD OSOBA SA BROKINOM I SUPKORTIKALNOM MOTORNOM AFAZIJOM\*

Tanja Milovanović<sup>\*\*a</sup>, Aleksandra Vidaković<sup>a,b</sup>, Ljubica Konstantinović<sup>a,b</sup>

<sup>a</sup>Klinika za rehabilitaciju „Dr Miroslav Zotović“, Beograd, Srbija

<sup>b</sup>Univerzitet u Beogradu – Medicinski fakultet, Beograd, Srbija

S obzirom na to da se poremećaji čitanja ispoljavaju kod različitih tipova afazičkih sindroma, ispitivanje čitanja kod osoba sa afazijom pruža uvid u nivo oštećenja ove jezičke funkcije u odnosu na lokalizaciju moždane lezije. Poređenje poremećaja čitanja kod osoba sa lezijom kortikalnih i supkortikalnih regiona doprinosi saznanjima o ulozi ovih oblasti mozga u realizaciji pojedinih aspekata čitanja. Cilj ovog rada bio je da se uporede poremećaji čitanja kod osoba sa Brokinom i supkortikalnom motornom afazijom. Uzorak je činilo 10 ispitanika sa Brokinom i 6 ispitanika sa supkortikalnom motornom afazijom. Procena sposobnosti čitanja izvršena je Testom čitanja reči za osobe sa afazijom, govornike srpskog jezika (Vuković, 2015) i suprestom čitanja iz Bostonske baterije testova za afazije (Goodglass & Kaplan, 1983). U statističkoj obradi podataka primenjeni su Fisher test i Man Whitney U test. Rezultati su pokazali da su ispitanici sa supkortikalnom motornom afazijom uspešniji od ispitanika sa Brokinom afazijom pri čitanju apstraktnih imenica ( $U = 11,00$ ,  $p < 0,05$ ) i čitanju glagola ( $U = 8,50$ ,  $p < 0,05$ ). Takođe je utvrđeno da ispitanici sa supkortikalnom motornom afazijom značajno brže čitaju reči koje reprezentuju konkretne imenice ( $U = 5,00$ ,  $p < 0,01$ ), apstraktne imenice ( $U = 10,00$ ,  $p < 0,05$ ) i funkcionalne reči ( $U = 8,50$ ,  $p < 0,05$ ) u poređenju sa ispitanicima sa Brokinom afazijom. Pored toga, utvrđena je statistički značajna razlika na nivou razumevanja pročitanih rečenica i pasusa ( $U = 10,00$ ,  $p < 0,05$ ) u korist ispitanika sa supkortikalnom motornom afazijom. Statistički značajna razlika dobijena je i u pogledu tipova grešaka u čitanju. Ispitanici sa Brokinom afazijom imali su značajno veći broj fonoloških grešaka ( $p < 0,05$ ) i morfoloških grešaka ( $p < 0,01$ ) u poređenju sa ispitanicima sa supkortikalnom motornom afazijom. Zaključeno je da su poremećaji čitanja izraženiji kod ispitanika sa ne fluentom afazijom uzrokovanom lezijom kortikalnih nego supkortikalnih oblasti mozga.

*Ključne reči: čitanje reči, razumevanje pročitano, Brokina afazija, supkortikalna motorna afazija*

\* Rad je nastao kao rezultat istraživanja na projektu „Evaluacija tretmana stečenih poremećaja govora i jezika“ (br. 179068), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* tanjamilovanovic0@gmail.com

# COMPARATIVE ANALYSIS OF READING DISORDERS IN PEOPLE WITH BROCA'S AND SUBCORTICAL MOTOR APHASIA\*

Tanja Milovanović<sup>a</sup>, Aleksandra Vidaković<sup>a,b</sup>, Ljubica Konstantinović<sup>a,b</sup>

<sup>a</sup>Clinic for Rehabilitation "Dr Miroslav Zotović", Belgrade, Serbia

<sup>b</sup>University of Belgrade – Faculty of Medicine, Belgrade, Serbia

Since reading disorders are exhibited in different types of aphasic syndromes, reading test in aphasia patients provides an insight into the level of damage to this linguistic function in relation to the localization of the brain lesion. Comparison of reading disorders in persons with lesion of cortical and subcortical regions contributes to the knowledge of the role of these areas of the brain in the realization of certain aspects of reading. The goal of this paper was to compare reading disorders in people with Broca's and subcortical motor aphasia. The sample consisted of 10 respondents with Broca's and 6 subjects with subcortical motor aphasia. In statistical data processing, the Fisher test and Man Whitney U test were applied. The results showed that subjects with subcortical motor aphasia were more successful than those with Broca's aphasia in reading abstract nouns ( $U = 11.00, p < 0.05$ ) and reading verbs ( $U = 8.50, p < 0.05$ ). It was also found that respondents with subcortical motor aphasia read words that represent specific nouns ( $U = 5.00, p < 0.01$ ), abstract nouns ( $U = 10.00, p < 0.05$ ) and functional words ( $U = 8.50, p < 0.05$ ) significantly faster in comparison with respondents with Broca's aphasia. In addition, a statistically significant difference was found on the level of understanding the read sentences and paragraphs ( $U = 10.00, p < 0.05$ ) in favor of subjects with subcortical motor aphasia. Statistically significant difference was obtained in terms of types of reading errors. Respondents with Broca's aphasia had a significantly higher number of phonological errors ( $p < 0.05$ ) and morphological errors ( $p < 0.01$ ) compared to respondents with subcortical motor aphasia. It was concluded that reading disorders were more pronounced in subjects with nonfluent aphasia caused by the lesion of the cortical than subcortical areas of the brain.

*Key words: reading words, understanding of words, Broca's aphasia, subcortical motor aphasia*

---

\* This paper is a result of the project "Treatment Evaluation of Acquired Speech and Language Disorders" (No. 179068), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

# POREMEĆAJI U MENTALNOM RAZVOJU

## MENTAL DISORDERS

---

## FEATURES OF SHORT-TERM (PSYCHOPHYSIOLOGICAL) READINESS FOR WORKING WITH CHILDREN WITH DISABILITIES IN PSYCHOLOGISTS WORKING WITH CHILDREN WITH TYPICAL DEVELOPMENT

Svetlana Stanislavovna Betanova\*\*, Victoria Gennadyevna Kolyagina

Moscow Region State University – Faculty of Special Pedagogy and Psychology, Moscow, Russia

In modern Russian education, in connection with the arrival of children with disability in general schools, the problem of their high-quality inclusion in general education process is sharply designated. Psychologists working with children with typical development have to be psychologically ready to work with other contingent of children. At first contacts with children with disabilities, barriers of fear, fastidiousness, emotional tension, insufficiency of short-term readiness are shown. Psychologists who constantly work with disabled children, have no such manifestations that testify to the passable stage of short-term readiness for such work and existence of steady long-term readiness. Results, devoted to identification of a condition of short-term readiness of psychologist working with children with typical development to work with disabled children are provided. Dependence of short-term readiness on a spirit on holding psychocorrectional actions, forecast of their possible results, confidence of psychologists in professional abilities, aspirations to work better is shown. 158 people participated in this research – practicing psychologists, 78 work with disabled children, 80 with children with typical development. Average age of respondents - 35 to 38 years. Length of service – 7 to 9 years. Age – preschool and younger school age (from 2-3 to 10-11 years). Selections are counterbalanced on age and length of service. The gender sign did not appear as different in connection with insufficient representation of males. Psychologists of the specified activities - PDI (psychologists working with disabled children) and PDN (psychologists working with children with typical development). Methods: seysmotremorometriya; technique of observation of external somato-vegetative and motive manifestations. Having investigated vegetative manifestations which serve as indicator of reactions of nervous system of the respondent and are expressed in short-term readiness, we carried out comparative analysis in groups of respondents (PDN and PDI). The results showed that studied phenomenon is in respondents of PDN group in an unripe state and needs development.

*Key words: psychologist, children with disabilities, vocational readiness activities, determinants of readiness, barriers of fear and disgust*

---

\*\* ss.betanova@mgou.ru

## ОСОБЕННОСТИ КРАТКОВРЕМЕННОЙ (ПСИХОФИЗИОЛОГИЧЕСКОЙ) ГОТОВНОСТИ К РАБОТЕ С ДЕТЬМИ-ИНВАЛИДАМИ У ПСИХОЛОГОВ, РАБОТАЮЩИХ С ДЕТЬМИ С НОРМАЛЬНЫМ РАЗВИТИЕМ

Светлана Станиславовна Бетанова, Виктория Геннадьевна Колягина

*Московский государственный областной университет – Факультет специальной педагогики и психологии, Москва, Россия*

В современном российском образовании в связи с приходом детей с инвалидностью в обычные школы остро обозначена проблема качественного включения их в общеобразовательный процесс. Психолог, привыкший работать с детьми с нормальным развитием, должен быть психологически готов работать с другим контингентом детей. Известно, что при первых контактах с детьми с аномалиями развития у специалиста проявляются психологические барьеры страха, безразличности, эмоциональной напряженности, т.е. недостаточность кратковременной (психофизиологической) готовности. Вместе с тем, у психологов, постоянно работающих с детьми-инвалидами, таких проявлений нет, что свидетельствует о пройденной стадии кратковременной готовности к такой работе и наличия устойчивой долговременной готовности. В статье представлены результаты исследования, посвященного выявлению состояния кратковременной готовности психолога, работающего с детьми с нормальным развитием, к работе с детьми-инвалидами. Показана зависимость кратковременной готовности от настроения на проведение психокоррекционных мероприятий, прогноза их возможных результатов, уверенности психолога в своих профессиональных способностях, его стремления работать лучше. В исследовании приняли участие 158 человек – практикующих психологов (преимущественно, женщин), из них 78 работают с детьми-инвалидами, 80 – с детьми с нормальным развитием. Средний возраст респондентов от 35 до 38 лет. Стаж работы в данном виде деятельности – от 7 до 9 лет. Возрастная категория детей – субъектов профессиональной деятельности – дошкольный и младший школьный возраст (от 2-3 до 10-11 лет). Выборки уравновешены по возрасту и стажу работы. Гендерный признак не фигурировал как дифференцировочный в связи с недостаточной представленностью лиц мужского пола. Психологи указанных направлений деятельности далее представлены как ПДИ (психологи, работающие с детьми-инвалидами) и ПДН (психологи, работающие с детьми с нормальным развитием). Методы: сейсмострелометрия; методика наблюдения за внешними сомато-вегетативными и двигательными проявлениями. Исследовав

вегетативные проявления, которые служат индикатором реакций нервной системы субъекта труда и выражаются в кратковременной готовности, мы провели ее сравнительный анализ в группах респондентов психологов, работающих с детьми с нормой (ПДН), и психологов, работающих с детьми-инвалидами (ПДИ). Результаты показали, что исследуемый феномен находится у респондентов группы ПДН в незрелом состоянии и нуждается в развитии.

*Ключевые слова: психолог, дети-инвалиды, профессиональная готовность к деятельности, детерминанты готовности, барьеры страха и брезгливости*



## SCREENING TOOL FOR CHILDREN WITH INTELLECTUAL DISABILITY

Wasim Ahmad\*\*, Bir Singh Chavan

*Government Rehabilitation Institute for Intellectual Disabilities, Chandigarh, India*

Screening and identification of children with intellectual disability has been a major concern in India. The research suggests that early identification and diagnosis can help to reduce burden of parents. The purpose of the research was to develop, validate and establish the sensitivity and specificity of the Screening Checklist for Children with Intellectual Disability (SCCID) which is a brief checklist for screening and identification of children with intellectual disability. This paper describes the methods and analysis for the development and validation of the screening tool. The samples of the present study were 301 children with intellectual disability age ranging from 3-6 yrs. The samples were selected from Uninon Territory, Chandigarh and Villeges of Mohali District of Punjab, India. Design: Area sampling design using purpose cum convenient sampling was employed. A brief (Five item) checklist which was developed by the investigators was used as screening tool. The IQ of the screened samples were further assessed for the purpose of diagnosis using standard tools such as MISIC (Malin Intelligence Scale for Indian Children), VAIS (Verbal Intelligence Scale), CPM (Coloured Progressive Matrices), SFBT (Seguin Form Board), and VSMS (Vineland Social Maturity Scale). The diagnosis was made by the trained psychologist. Results of the analysis shows that out of 301 screened samples 265 were diagnosed with intellectual disability using standard tools. The reliability and validity of the SCCID was determined using reliability and validity of correlation of coefficient. The reliability was 0.756 and validity ranged from 0.409 to 0.479, respectively. Although, further studies of validity and reliability are necessary to establish the tool before widespread use, the SCCID is a needed step towards screening of children with intellectual disability.

*Key words: intellectual disability, screening, identification*

---

\*\* wasimarid@gmail.com

## STUDYING AND EVALUATING EMOTIONAL PERSONAL TRENDS AND BEHAVIORAL REPERTOIRE OF EMOTIONAL RESPONSE OF YOUNGER STUDENTS WITH INTELLECTUAL DISABILITY

Natalia Yuryevna Verkhoturova<sup>\*\*a</sup>, Alexey Andreevich Dmitriev<sup>b</sup>

<sup>a</sup>Krasnoyarsk State Pedagogical University named after V.P. Astafyev – Institute of Social and Humanitarian Technologies, Krasnoyarsk, Russia

<sup>b</sup>Moscow Region State University – Faculty of Special Pedagogy and Psychology, Moscow, Russia

The article raises the insufficiently studied, but the actual problem of the need for timely study and evaluation of emotional and personal tendencies and behavioral repertoire of emotional response of pupils of primary school age with impaired intellectual development. The solution of key issues related to the improvement of the processes of socialization and social adaptation of this contingent of schoolchildren in the conditions of modern society cannot be considered outside the context of the problem of studying and correcting the emotional regulation of their behavior. The studied schoolchildren are characterized by a significant lag in the development of emotional response, a narrow range of experiences, frequent inconsistency of emotional reactions with external influences in strength, intensity and content, limited interpretation of sensory material, which lead to inadequate perception of other people's emotional reactions and not always adequate and differentiated expression of their own emotional responses in socially acceptable ways. All this provokes difficulties in students' relationships with impaired intellectual development between themselves and with surrounding adults, creates serious barriers in their training and education, mediates the occurrence of deviations in behavior of different order, leads to difficulties of social adaptation and socialization. On the basis of the ongoing research, specific features of emotional and personal tendencies and behavioral repertoire of emotional response of pupils of primary school age with impaired intellectual development are described, which are not only possible, but also necessary to undergo psychological and pedagogical correction in order to improve the processes of socialization and integration of the pupils under study.

*Key words: emotional response, emotional reactions, emotional-personal tendencies, behavioral repertoire, components of emotional response, students with intellectual disabilities*

---

<sup>\*\*</sup> verhotyrov@mail.ru

## CHALLENGES OF DEVELOPING READING LITERACY OF STUDENTS WITH MILD INTELLECTUAL DISABILITIES

Nika Jenko\*\*, Mojca Lipec Stopar

*University of Ljubljana – Faculty of Education, Ljubljana, Slovenia*

According to various studies, reading instruction for students with mild intellectual disabilities (ID) is extremely challenging. Reading lessons are considered one of the most demanding school activities for this group of students by many authors. The explanation of reading difficulties of students with ID includes two basic paradigms. The first one relates to the overall slow cognitive development reflected in the literacy development as well. The latter is slow but it follows the same sequences as in students without ID. The second paradigm highlights structural differences in reading literacy of students with and without ID, with different cognitive and linguistic factors responsible for persistence of reading problems even among older readers with ID. The Reading Literacy Curriculum for students with mild ID in Slovenia (2003) estimates that by the end of literacy development the students will master reading technique to the point where they can focus their attention primarily on reading comprehension. Most students with mild ID continue their education in lower vocational education programs, which additionally justifies the requirement for effective reading instruction in elementary program for these students. In the present research we studied the reading literacy of students with mild ID at the end of elementary school, who continue their education in lower vocational education programs. We included 70 ninth-grade students with mild ID. We used factor analysis to examine their reading literacy structure. We upgraded our findings by comparing characteristics of reading aloud with the reading rates presented in the literature. This gave us an insight in ninth-graders' readiness for independent learning with reading which is important for successful further education and later participation in everyday life. Our results show that students with ID have reading fluency problems even in higher grades. The latter highlights the need for additional teachers' attention in planning approaches to encourage reading literacy of these students. Based on our findings we give different recommendations for teaching reading which can be included in teaching different academic subjects.

*Key words: reading literacy, intellectual disabilities, reading instruction, adjustments*

---

\*\* nika.jenko@pef.uni-lj.si

## CHARACTERISTICS OF REPETITIVE AND RESTRICTIVE BEHAVIORS IN CHILDREN WITH AUTISM SPECTRUM DISORDER AND TYPICALLY DEVELOPING CHILDREN

Sana Čačko\*\*, Ivona Mršić

University of Zagreb – Faculty of Education and Rehabilitation Sciences, Centre for Rehabilitation, Zagreb, Croatia

Repetitive and restrictive behaviors (RRBs) are the main characteristic and diagnostic criteria for autism spectrum disorder (ASD) alongside deficits in social communication and social interaction. However, RRBs are not unique to ASD and are also a part of typical development. There is a lack of data demonstrating the characteristics of those behaviors in a population of typically developing children in comparison with children with ASD. The aim of this research is to determine frequency and diversity of RRBs (stereotyped, self-injurious, compulsive, ritualistic, sameness and restricted behavior) in typically developing children and in children with ASD together with statistically significant differences of these behaviors between these two groups. The research was conducted on typically developing children (chronological age between 2 and 4; N = 20) and preschool children who are diagnosed with ASD (mental age between 2 and 4; N = 20). The instrument for this research was Repetitive Behavior Scale – Revised (RBS-R), a parent-completed questionnaire. Based on preliminary data given by parametric statistical analyses, RRBs are expected to occur in children with ASD as well as in typically developing children. Higher frequency and greater diversity of RRBs is expected to occur in a group of children with ASD. Results will highlight the importance of clearer data and standardized diagnostic instruments regarding RRB assessment in children with ASD.

*Key words: repetitive and restrictive behaviors, autism spectrum disorder, typical development*

---

\*\* sana.cacko@gmail.com

## TOPOGRAFIJA SAMOPOVREĐIVANJA KOD DECE SA POREMEĆAJEM AUTISTIČKOG SPEKTRA I DECE SA INTELEKTUALNOM OMETENOŠĆU

Danijel Marković<sup>\*\*,\*\*\*</sup>

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Samopovređivanje je ponašanje usmereno ka sopstvenom telu, koje je praćeno njegovim fizičkim oštećenjem. Postoji veliki broj topografija samopovređivanja kod dece sa poremećajem autističkog spektra (PAS) i dece sa intelektualnom ometenošću (IO), pri čemu se svako od njih ponaosob može samopovređivati na više različitih načina. Istraživanje ima za cilj da utvrdi topografiju samopovređivanja kod dece sa PAS i dece sa IO. Uzorak je formiran od 22 ispitanika sa PAS i pridruženom IO, uzrasta od 7 do 12,9 godina (AS = 9,72; SD = 1,74), i 30 ispitanika sa IO starosti od 7,1 do 12,1 godina (AS = 9,68; SD = 1,70). U oba slučaja se radi o ispitanicima sa težim oblicima IO. Topografija samopovređivanja je utvrđena primenom podskale Samopovređivanje iz Inventara problematičnog ponašanja, pri čemu su podaci dobijeni od roditelja. Samopovređivanje je prisutno kod 90,9% dece sa PAS, i kod nešto više od polovine (56,7%) dece sa IO. Prinošenje ustima ili gutanje nejestivih predmeta (pika) (65%) je najučestalija topografija samopovređivanja kod dece sa PAS, dok se među učestalije ubrajaju još i udaranje po glavi (50%) i drugim delovima tela (45%), grebanje (45%) i štipanje (40%). Kod dece sa IO, udaranje po glavi, prinošenje ustima ili gutanje nejestivih predmeta (pika), čupanje noktiju na prstima ruku i nogu, gutanje vazduha i čupanje kose su najzastupljenije topografije samopovređivanja, pri čemu je svaka od pomenutih, registrovana kod 41,2% ispitanika. Broj topografija samopovređivanja kod dece sa PAS kreće se između 1 i 10 (AS = 4,60; SD = 2,68), a u slučaju dece sa IO, od 1 do 9 (AS = 4,00; SD = 2,42). Uzrast statistički značajno i visoko korelira sa brojem topografija samopovređivanja ( $r = 0,605$ ,  $p < 0,01$ ), samo kod dece sa PAS. Neophodno je sagledati uticaj različitih činilaca koji mogu imati ulogu u nastanku i perzistiranju samopovređivanja, zatim, utvrditi funkciju samopovređivanja i primeniti bihevioralne strategije za njegovo preusmeravanje.

*Ključne reči: poremećaj autističkog spektra, intelektualna ometenost, samopovređivanje, topografija*

<sup>\*\*</sup> danijel\_markovic1803@yahoo.com

<sup>\*\*\*</sup> Student doktorskih akademskih studija

## TOPOGRAPHY OF SELF-INJURY IN CHILDREN WITH AUTISM SPECTRUM DISORDER AND CHILDREN WITH INTELLECTUAL DISABILITY

Danijel Marković\*\*\*

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Self-injury is behavior directed towards one's own body, followed by its physical damage. There is a large number of topography of self-injury in children with autism spectrum disorder (ASD) and children with intellectual disability (ID), whereby each of them individually, may self-injure in several different ways. The aim of the research was to determine the topography of self-injury in children with ASD and children with ID. The sample was formed from 22 subjects with ASD and associated ID, from 7 to 12.9 years of age ( $M = 9.72$ ;  $SD = 1.74$ ), and 30 subjects with ID, 7.1 to 12.1 years of age. In both cases, these people had more severe forms of ID. The topography of self-injury was determined by using the Self-injury subscale from the Behavior Problems Inventory, wherein the data was obtained from the parents. Self-injury was present in 90.9% of children with ASD, and in slightly more than half (56.7%) of children with ID. Mouthing or swallowing of non-food items (pica) (65%), was the most common topography of self-injury in children with ASD, while hitting on the head (50%) and other parts of the body (45%), scratching (45%) and pinching (40%) were among more frequent ones. In children with ID, hitting on the head, mouthing or swallowing of non-food items (pica), pulling out finger or toe nails, air swallowing and hair pulling were the most common topography of self-injury, with each of them registered in 41.2% of respondents. The number of topography of self-injury in children with ASD ranges between 1 and 10 ( $M = 4.60$ ;  $SD = 2.68$ ), and in children with ID, from 1 to 9 ( $M = 4.00$ ;  $SD = 2.42$ ). Age statistically significantly and highly correlated with the number of topography of self-injury ( $r = 0.605$ ,  $p < 0.01$ ), only in children with ASD. It is necessary to consider the influence of various factors that may play a role in the onset and persistence of self-injury, then, establish the function of self-injury and apply behavioral strategies for its redirection.

*Key words: autism spectrum disorder, intellectual disability, self-injury, topography*

---

\*\*\* PhD student

# NEVERBALNO PLANIRANJE I CRTEŽ KOD DECE S LAKOM INTELEKTUALNOM OMETENOŠĆU\*

Milica Gligorović\*\*, Nataša Buha

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Imajući u vidu da se crtež osoba sa intelektualnom ometenošću često karakteriše neadekvatnim proporcijama, nedostatkom prostorne organizacije i limitiranim brojem detalja, koji mogu biti odraz teškoća u domenu planiranja, cilj ovog istraživanja je da se utvrdi odnos veštine crtanja i neverbalnog planiranja kod dece sa lakom intelektualnom ometenošću (LIO). Uzorkom je obuhvaćeno šezdesetoro dece sa idiopatskom LIO (IQ 50-70, AS = 60,58; SD = 7,24), oba pola (28 – 46,7% devojčica), uzrasta 10-14 godina (AS = 11,61; SD = 1,29). U uzorak su uključena deca kod koje nisu evidentirani neurološki ili/i genetski poremećaji i višestruka ometenost. Nije utvrđena značajna povezanost IQ sa hronološkim uzrastom ( $r = -0,072$ ,  $p = 0,569$ ) i polom ( $F(1,60) = 0,116$ ,  $p = 0,735$ ) ispitanika. Za procenu veštine crtanja korišćen je subtest Crtanje, koji pripada Akadija testu razvojnih sposobnosti. Neverbalno planiranje procenjeno je modifikovanom verzijom testa Londonska kula, koja se, za razliku od originalne, sačinjene od 10, sastoji iz 15 zadataka. Praćeno je šest varijabli: inicijalno vreme, vreme pomeranja kugli, ukupan broj poteza, kršenje pravila i broj tačnih odgovora. Primenom koeficijenta parcijalne korelacije (uz kontrolu inteligencije), utvrđen je statistički značajan odnos postignuća na subtestu Crtanje i vremena pomeranja kugli ( $r = -0,343$ ,  $p = 0,006$ ), ukupnog broja poteza ( $r = -0,274$ ,  $p = 0,030$ ), kršenja pravila ( $r = -0,316$ ,  $p = 0,012$ ) i broja tačnih odgovora ( $r = 0,249$ ,  $p = 0,049$ ). Prema rezultatima višestruke regresione analize, najznačajniji doprinos varijabilnost rezultata procene veštine crtanja daje vreme pomeranja kugli (oko 16%). Na osnovu rezultata istraživanja može se zaključiti da je neverbalno planiranje značajan činiac usvajanja veštine crtanja kod dece sa LIO.

*Ključne reči: neverbalno planiranje, crtež, laka intelektualna ometenost*

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* gligorovic@fasper.bg.ac.rs

## NONVERBAL PLANNING AND DRAWING IN CHILDREN WITH MILD INTELLECTUAL DISABILITY\*

Milica Gligorović, Nataša Buha

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

Having in mind that drawing of people with intellectual disability is often characterized by inadequate proportions, lack of spatial organization and limited number of details which can be the reflection of planning difficulties, the aim of this research was to determine the relationship between drawing skills and nonverbal planning in children with mild intellectual disability (MID). The sample consisted of 60 children with idiopathic MID (IQ 50-70,  $M = 60.58$ ,  $SD = 7.24$ ), of both genders (28 – 46.7% of girls), between 10 and 14 years of age ( $M = 11.61$ ;  $SD = 1.29$ ). Children with neurological or/and genetic disorder and multiple disabilities were excluded. There was no significant relation of participants' IQ with their chronological age ( $r = -0.072$ ,  $p = 0.569$ ) and gender ( $F(1,60) = 0.116$ ,  $p = 0.735$ ). Subtest Drawing, which is a part Acadia test of developmental abilities, was used for the assessment of drawing skills. Nonverbal planning was assessed by a modified version of the London Tower Test. Unlike the original test that is made up of 10 tasks, the modified version consists of 15 tasks. Six variables were analyzed: initial time, moving time, total number of moves, violation of the rules, and the number of correct answers. By using the partial correlation coefficient (controlling of the intelligence), a statistically significant relation was determined between achievement on the Drawing subtest and the moving time ( $r = -0.343$ ,  $p = 0.006$ ), the total number of moves ( $r = -0.274$ ,  $p = 0.030$ ), violation of the rules ( $r = -0.316$ ,  $p = 0.012$ ) and the number of correct responses ( $r = 0.249$ ,  $p = 0.049$ ). According to the results of multiple regression analysis, moving time was the most significant contributor of the results variability on drawing skills subtest (about 16%). Based on the results of this research it can be concluded that nonverbal planning is an important factor of the acquisition of drawing skills in children with MID.

*Key words: nonverbal planning, drawing, mild intellectual disability*

---

\* This paper is a result of the project "Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs" (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.



## IGRA I UČENJE KROZ IGRU KOD DECE SA RAZVOJNIM SMETNJAMA

Ružica Zdravković<sup>\*\*a</sup>, Aleksandra Pantović<sup>b</sup>

<sup>a</sup>Logopedilište, Beograd, Srbija

<sup>b</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Važnost igre sagledavana kroz različite naučne discipline ima dugu istoriju. Za ideju učenja kroz igru i uvođenje igre u vaspitno-obrazovni rad u predškolske ustanove najzaslužniji je Frebel (Frebel). Igra kao složena aktivnost sadržana je u svim oblicima ljudske delatnosti. Kroz igru deca podstiču svoju kreativnost, jezik, kognitivne kompetence, socijalne veštine i motoričke sposobnosti, podstiču razvoj kognitivnih sposobnosti uviđajući uzročno-posledične veze i podstiču razvoj viših nivoa mišljenja. Pozitivne efekte učenja kroz igru potvrđuje veliki broj istraživanja sprovedenih u Evropi, Americi i Australiji. Uprkos tome, registruje se nedovoljna primena ove metode u vaspitno-obrazovnom procesu. Razumevanje dečije igre je prvi korak ka pravilnoj implementaciji igre u školski kurikulum. S druge strane, razvoj igre kod dece sa razvojnim teškoćama ima drugačiji tok u odnosu na decu tipične populacije. Upoznavanje razvoja igre kod dece sa razvojnim smetnjama, korišćenje igre kao vida tretmana usmerenog na dete obojenog pozitivnim emocijama i empatijom, formiranje partnerskog odnosa između roditelja i terapeuta nesumnjivo podstiču lični razvoj deteta. Nema dileme da je učenje kroz igru efikasan put u pravilnoj stimulaciji ranog razvoja i da bi primena i implementacija igre u školski kurikulum olakšala savladavanje svakodnevnih teškoća sa kojima se nose deca tipične populacije i deca sa razvojnim teškoćama. Stoga, cilj ovog rada jeste isticanje specifičnosti u razvoju igre kod dece sa razvojnim smetnjama kao i važnosti primene igre u vaspitno-obrazovnom sistemu.

*Ključne reči: igra, učenje kroz igru, roditelj, terapeut, dete sa razvojnim smetnjama*

---

<sup>\*\*</sup> ruzica.zdravkovic91@gmail.com

## PLAY AND LEARNING THROUGH PLAY AMONG CHILDREN WITH DEVELOPMENTAL DISABILITIES

Ružica Zdravković<sup>a</sup>, Aleksandra Pantović<sup>b</sup>

<sup>a</sup>Logopedilište, Belgrade, Serbia

<sup>b</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

The importance of learning through play viewed through different scientific disciplines has a long history. Frebel is the most deserving of the idea of learning through play and introducing it into educational work in preschool institutions. Child play as a complex activity is present in all forms of human activity. Through play, children stimulate their creativity, language, cognitive, social, motor skills, stimulate the development of cognitive abilities by recognizing cause-effect relationships and stimulating the development of higher levels of thinking. The positive effects of learning through play are confirmed by a large number of studies conducted in Europe, America, and Australia. In spite of this, insufficient application of this method in the educational process is registered. Understanding children's play is the first step towards the correct implementation of the play in the school curriculum. On the other hand, the development of play in children with developmental disabilities has a different trend compared to children of typical population. Getting to know the development of play in children with developmental disorders, the use of play as a form of treatment directed at a child painted with positive emotions and empathy, the formation of a partnership relationship between parents and therapists undoubtedly stimulate the child's personal development. There is no doubt that learning through play is an effective way to properly stimulate early development and that their implementation in the school curriculum will facilitate the overcoming of everyday difficulties that children of typical population and children with developmental disabilities experience. Therefore, the aim of this paper is to emphasize the specificity of the development of play in children with developmental disabilities, as well as the importance of using the play in the educational system.

*Key words: play, learning through play, parent, therapist, children with developmental disabilities*

## DETERMINANTE SOCIOMETRIJSKOG STATUSA SREDNJOŠKOLACA SA INTELEKTUALNOM OMETENOŠĆU\*

Bojan Dučić\*\*, Svetlana Kaljača

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Primarni cilj istraživanja bio je utvrđivanje odnosa sociometrijskog statusa i nivoa impulsivnosti kod adolescenata sa intelektualnom ometenošću (IO). Sekundarni cilj istraživanja bio je utvrđivanje povezanosti između sociometrijskog statusa ispitanika i kvaliteta njihovog učešća u socijalnim interakcijama, školskim i sportskim aktivnostima, ocenjenog od strane vršnjaka. Uzorak su činili učenici srednje škole koji tokom školovanja borave u internatskom smeštaju. Uzorkom je obuhvaćeno 34 učenika sa IO. Najmlađi ispitanik je imao 15, a najstariji 21 godinu (AS = 17,76, SD = 1,69). Sociometrijski status, socijalni odnosi, akademski uspeh i uspeh u sportskim aktivnostima utvrđen je primenom upitnika konstruisanog za potrebe ovog istraživanja. Za procenu nivoa impulsivnosti korišćen je *Upitnik o aktivnostima* prilagođen upotrebi kod osoba sa IO. Ovaj instrument sadrži 17 ajtema koji su grupisani u tri celine: *Preterana reaktivnost*, *Impulsivnost* i *Impulsivni govor*. Man Vitni testom utvrđeno je da su učenici koje drugi najčešće biraju za prijatelje (Md = 2,00, SD = 7,11) u odnosu na učenike koji nemaju povoljan sociometrijski status (Md = 9,00, SD = 6,70) statistički značajno manje skloni impulsivnim reakcijama ( $U = 20,50$ ,  $z = -2,56$ ,  $p = 0,011$ ). Vršnjaci statistički značajno češće za prijatelje biraju učenike koje percipiraju kao uspešne u ostvarivanju akademskih rezultata ( $r = 0,476$ ,  $p = 0,04$ ), za koje procenjuju da su popularni u vršnjačkoj grupi ( $r = 0,439$ ,  $p = 0,009$ ) i za koje smatraju da ostvaruju pozitivne socijalne interakcije sa vaspitačima ( $r = 0,392$ ,  $p = 0,022$ ). Utvrđeno je da uspeh u sportskim aktivnostima nije značajno povezan sa sociometrijskim statusom učenika ( $r = -0,199$ ,  $p = 0,259$ ). Adolescenti sa IO se pri izboru prijatelja najčešće opredeljuju za vršnjake sa IO koji ne ispoljavaju impulsivno ponašanje i za koje procenjuju da su uspešni u školskom učenju i ostvarivanju socijalnih interakcija.

*Ključne reči: sociometrijski status, socijalne interakcije, prijateljski odnosi*

\* Rad je nastao kao rezultat istraživanja na projektima „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025) i „Evaluacija tretmana stečenih poremećaja govora i jezika“ (br. 179068), koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* bojanducic@yahoo.com

## DETERMINANTS OF THE SOCIOMETRIC STATUS OF SECONDARY SCHOOL STUDENTS WITH INTELLECTUAL DISABILITIES\*

Bojan Dučić, Svetlana Kaljača

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

The primary goal of the study was to determine the relationship between the sociometric status and the level of impulsivity in adolescents with intellectual disability (ID). The secondary goal of the research was to determine the relationship between the sociometric status of the subjects and the quality of their participation in social interactions, school and sports activities, assessed by peers. The sample consisted of boarding secondary school students. The sample included 34 students with ID. The youngest subject was 15, and the oldest 21 ( $M = 17.76$ ,  $SD = 1.69$ ). Sociometric status, social relations, academic success and success in sports activities were determined by a questionnaire designed for this research. For the assessment of the level of impulsivity, the *Questionnaire on activities* adapted for use in persons with ID was used. This instrument contains 17 items that are grouped into three parts: *Excessive reactivity*, *Impulsivity* and *Impulsive speech*. The Mann Whitney test found that students most frequently chosen as friends ( $Md = 2.00$ ,  $SD = 7.11$ ), compared to students who did not have favorable sociometric status ( $Md = 9.00$ ,  $SD = 6.70$ ), were statistically significantly less prone to impulsive reactions ( $U = 20.50$ ,  $z = -2.56$ ,  $p = 0.011$ ). Peers were statistically significantly more likely to be friends with students who were perceived as successful in achieving academic results ( $r = 0.476$ ,  $p = 0.04$ ), who they found popular in the peer group ( $r = 0.439$ ,  $p = 0.009$ ) and considered capable of achieving positive social interactions with educators ( $r = 0.392$ ,  $p = 0.022$ ). It was found that success in sports activities was not significantly related to the sociometric status of students ( $r = -0.199$ ,  $p = 0.259$ ). When choosing friends, adolescents with ID most often opt for peers with ID who do not exhibit impulsive behavior and who they find successful at school and in social interaction.

*Key words: sociometric status, social interaction, friendly relations*

---

\* This paper is a result of the projects "Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs" (No. 179025) and "Evaluation of Treatment of Acquired Speech and Language Disorders" (No. 179068), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## PRIMENA HORTIKULTURNIH INTERVENCIJA KOD OSOBA SA OMETENOŠĆU

Biljana Milanović Dobrota\*\*, Gordana Odović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Vrsta komplementarnog tretmana pod nazivom Hortikulture intervencije podrazumeva intervencije koje koriste biljne materijale kao terapijsko sredstvo za unapređenje fizičkog i mentalnog stanja osobe. Cilj rada je da pregledom relevantne literature prikaže različite modalitete hortikulture intervencija i efekte njihove primene kod osoba sa ometenošću. Na samom kraju formalnog kontinuuma hortikulture intervencija nalazi se Hortikultura terapija koju realizuju hortikulture terapeuti da bi se postigli specifični terapijski ciljevi. Terapijska hortikultura je manje formalan metod jer ne zahteva definisanje ciljeva, ni vođenje dokumentacije, ali se intervencija odvija pod nadzorom obučenog terapeuta. Socijalna hortikultura se sprovodi kao vid rekreativne aktivnosti. Stručno osposobljavanje za hortikulture je četvrti modalitet čiji se program bazira na principima hortikulture terapije, dok se obuka sprovodi pri školama, rezidencijalnim ili rehabilitacionim ustanovama, zatvorima i slično. Dosadašnja istraživanja u okviru hortikulture intervencija govore o blagotvornim kognitivnim, fizičkim, socijalnim i psihološkim efektima kod osoba sa ometenošću. Pored potencijala koje nude neinvazivni modaliteti hortikulture intervencija prikazana su i neka ograničenja u primeni. Iako je ovo još uvek nova oblast, određeni programi intervencija mogu se lako implementirati u širokom spektru zdravstvenih, obrazovnih, rehabilitacionih i rezidencijalnih okruženja.

*Ključne reči: hortikulture intervencije, hortikultura terapija, osobe sa ometenošću*

---

\*\* biljanamilanovicdobrota@gmail.com

## APPLICATION OF HORTICULTURAL INTERVENTIONS IN PERSONS WITH DISABILITIES

Biljana Milanović Dobrota, Gordana Odović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

The type of complementary treatment under term Horticultural interventions implies interventions that use plants materials as a therapeutic tool of improving physical and mental condition of a person. The aim of this paper is to show various modalities of horticultural intervention and the effects of their application in persons with disabilities, by reviewing the relevant literature. At the end of the formal continuum horticultural interventions is horticultural therapy, implemented by horticultural therapists in order to achieve specific therapeutic goals. Therapeutic horticulture is a less formal method because it does not require definition of goals, nor the administration of documentation, but intervention is under supervision of a trained therapist. Social horticulture is carried out as a form of recreational activity. Vocational training for horticulture is the fourth modality whose program is based on the principles of horticultural therapy, while training is conducted at schools, residential or rehabilitation facilities, prisons and other places. Previous studies in the context of horticultural interventions mention the beneficial cognitive, physical, social and psychological effects in people with disabilities. Apart from the potential offered by non-invasive modalities of horticultural interventions, some limitations of application are also shown. Although this is still a new field, certain programs of interventions can be easily implemented in a wide range of health, education, rehabilitation, and residential environments.

*Key words: horticultural interventions, horticultural therapy, persons with disabilities*

## PRIPREMA OSOBA SA POREMEĆAJEM IZ SPEKTRA AUTIZMA ZA MEDICINSKE INTERVENCIJE\*

Nenad Glumbić\*\*

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Raznovrsne medicinske intervencije često izazivaju anksioznost i strah kod osoba sa poremećajem iz spektra autizma što rezultuje izbegavajućim ponašanjem. Socijalna priča u kojoj je objašnjen svaki korak medicinske procedure može se prezentovati osobi sa autizmom svakoga dana pre same intervencije. U početnim fazama bihevioralnog tretmana trebalo bi koristiti omiljene objekte (crtane filmove, igračke, hranu...), bilo kao distraktore, bilo kao sredstvo diferencijalnog potkrepljivanja. Ako osoba sa autizmom ispolji disruptivno ponašanje, pristup potkrepljivačima se privremeno obustavlja. Uobičajen pristup u tretmanu izbegavajućeg ponašanja povezanog sa medicinskim procedurama je sistematska desenzitizacija ili postepeno izlaganje averzivnim stimulusima. U ovom procesu postepeno se smanjuje rastojanje između osobe sa autizmom i medicinskog uređaja. Defektolog daje naloge osobi sa autizmom, tako što navodi čitav niz veoma lakih zadataka pre nego što dođe do onih koji su teži. Ova strategija, poznata kao bihevioralni momenat, veoma je efikasna u procesu desenzitizacije. Tretman se sprovodi in vivo ili u simuliranom okruženju.

*Ključne reči: desenzitizacija, bihevioralne tehnike, potkrepljenje*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Socijalna participacija osoba sa intelektualnom ometenošću“ (br. 179017), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* [nenadglumbic@gmail.com](mailto:nenadglumbic@gmail.com)

## PREPARING PEOPLE WITH AUTISM SPECTRUM DISORDER FOR MEDICAL PROCEDURES\*

Nenad Glumbić

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Various medical procedures usually generate anxiety and fear in people with autism spectrum disorder (ASD) resulting in avoidance behavior. A social story detailing each step of a medical procedure could be presented to a person with ASD on a daily basis before an intervention. During the initial steps of behavioral treatment, one should use preferred objects (cartoons, toys, food...), either in a form of distracting stimuli, or as a means of differential reinforcement. The access to the reinforcers may be temporary withdrawn, if a person with ASD manifests disruptive behavior. A common approach for treating health-related avoiding behavior is systematic desensitization or graduated exposure to aversive stimuli. In this process the physical proximity between a person with autism and medical device gradually decreases. A special educator gives an order to the person with ASD, making series of requests that are very easy before making requests that are more difficult. This strategy known as behavioral momentum is very effective in the process of desensitization. The treatment could be conducted in vivo or in simulated environment.

*Key words: desensitization, behavioral techniques, reinforcement*

---

\* This paper is a result of the project "Social Participation of Persons with Intellectual Disability" (No. 179017), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.



## PROBLEMI I KVALITET ŽIVOTA PORODICA SA DJECOM SA SMETNJAMA IZ SPEKTRA AUTIZMA U CRNOJ GORI

Ljiljana Jovanović\*\*, Jovana Romandić

Resursni centar „1. jun“, Podgorica, Crna Gora

Decenijski rad sa djecom sa smetnjama iz spektra autizma podrazumjeva svakodnevnu komunikaciju sa roditeljima te djece. Upečatljiva je činjenica da u većini slučajeva brigu o toj djeci preuzima majka dok ih otac nerjetko napušta. Pored toga uočavamo niz teškoća sa kojima se te porodice skoro svakodnevno susreću. Ti problemi se već generacijama ponavljaju bez adekvatnog rješenja. Da to ne bi ostalo na nivou naših zapažanja i pretpostavki, izazov nam je predstavila mogućnost da sprovedemo istraživanje anketirajući roditelje djece sa smetnjama iz spektra autizma. Anketiranjem smo obuhvatili roditelje koji svoju djecu dovode u Resursni centar „1. jun“ na individualne tretmane, kao i roditelje čija su djeca uključena u nastavni proces Resursnog centra. Anketirali smo, takođe, i roditelje čija djeca nemaju dodirnih tačaka sa Resursnim centrom. Njihova djeca pohađaju redovan sistem školovanja po prilagođenom programu. Anketiranjem su bili obuhvaćeni roditelji iz sjevernog i centralnog dijela Crne Gore, kao i roditelji iz primorskih opština. Anketa se sastoji od 24 pitanja podjeljenih u tri ključne oblasti. Pitanja se odnose na eventualne problematične situacije kao i na kvalitet usluga koje porodice dobijaju na polju zdravstva, na polju obrazovanja, kao i pitanja koja se odnose na same porodične odnose. Sumiranjem odgovora dobili smo jasnu sliku o kvalitetu usluga koje ovi roditelji dobijaju i izdvojili polja na kojima se susreću sa najviše teškoća, kao i segmente u kojima bi im pomoć bila najneophodnija.

*Ključne riječi: porodica, zdravstvo, obrazovanje, kvalitet, problemi*

---

\*\* ljilja.jovanovic85@gmail.com

## PROBLEMS AND QUALITY OF LIFE FOR FAMILIES WITH CHILDREN AFFECTED BY SPECTRUM OF AUTISM IN MONTENEGRO

Ljiljana Jovanović, Jovana Romandić

Resource Center "June 1<sup>st</sup>", Podgorica, Montenegro

Decades of work with children affected by autism spectrum disorders implies daily communication with parents and children. It is a striking fact that in most cases the care of these children is taken over by the mother until their father commonly leaves the family. In addition, we note a series of difficulties which these families encounter almost daily. This problem has been repeated for generations without an adequate solution. For this not to remain just at the level of our observations and assumptions, the challenge was presented with a possibility to conduct a survey with parents who have children with autism spectrum disorders. Surveying will include parents who bring their children to the Resource Center 1<sup>st</sup> Jun for individual treatments as well as parents whose children are included in the Resource Center's teaching process. We will also interview parents who do not have contact with the Resource Center. Their children attend a regular schooling system with customized educational program. Surveying will include parents from the northern and central part of Montenegro as well as parents from coastal municipalities. The survey consists of 24 questions divided into three key areas. The questions are related to possible problematic situations as well as to the quality of services that families receive in the field of health, education and family related issues. The questions are concrete and by summarizing the answers we can get a clear picture of the quality of services that these parents receive and we will also isolate the field with the most difficulties and the segment in which this would be the most helpful.

*Key words: family, health, education, quality, problems*

## RODITELJSKI LOKUS KONTROLE I NJEGOVA POVEZANOST SA SOCIO-DEMOGRAFSKIM VARIJABLAMA KOD MAJKI DECE SA MOTORIČKIM POREMEĆAJIMA I DECE SA INTELEKTUALNOM OMETENOŠĆU

Jovana Tomić\*\*, Ivona Milačić Vidojević

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Utvrđeno je da su roditelji sa unutrašnjim lokusom kontrole, u poređenju sa roditeljima koji imaju spoljašnji lokus kontrole, odgovorniji, dosledniji, veštiji u sakupljanju važnih informacija o razvoju i vaspitanju deteta i bolje prilagođeni što ih čini efikasnijim u odgajanju dece. Cilj istraživanja je bio da se utvrdi povezanost roditeljskog lokusa kontrole i socio-demografskih varijabli kod majki dece s motoričkim poremećajima (MP) i dece sa intelektualnom ometenošću (IO). Drugi cilj istraživanja je bio da se utvrdi da li postoje razlike u lokusu kontrole kod ove dve grupe roditelja. Uzorkom je obuhvaćeno 34 majke dece sa IO i 25 majki dece sa MP, različitog nivoa obrazovanja, starosti i nivoa prihoda. Za ispitivanje lokusa kontrole korišćena je Skala lokusa kontrole roditelja – kraća forma. Utvrđeno je da se sa porastom starosti majki, nivoa obrazovanja i visine prihoda povećava tendencija pomeranja ka unutrašnjem lokusu kontrole. Nisu utvrđene statistički značajne razlike u roditeljskom lokusu kontrole kod majki dece sa IO i majki dece sa MP ( $t = 0,603$ ,  $df = 47$ ,  $p = 0,531$ ). Stručnjaci mogu, menjanjem ličnih uverenja roditelja o njihovoj mogućnosti uticaja na ponašanje deteta i menjanjem percepcije roditelja o stresnoj situaciji u kojoj se nalaze, da deluju na roditelje u cilju njihovog osnaživanja, što se može pozitivno odraziti na razvoj deteta.

*Ključne reči: roditeljski lokus kontrole, socio-demografske varijable, majke dece sa intelektualnom ometenošću, majke dece sa motoričkim poremećajima*

---

\*\* dzovana133@gmail.com

## PARENTAL LOCUS OF CONTROL AND ITS RELATIONSHIP WITH SOCIO-DEMOGRAPHIC VARIABLES IN MOTHERS OF CHILDREN WITH MOTOR DISABILITIES AND CHILDREN WITH INTELLECTUAL DISABILITY

Jovana Tomić, Ivona Milačić Vidojević

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

It has been found that parents with an internal locus of control are more responsible, more consistent, better adapted, and more able in gathering essential information compared to parents who have an external locus of control, making them more effective in raising children. The aim of the study was to establish a relationship between parental locus of control and socio-demographic characteristics in the sample of mothers of children with intellectual disability (ID) and motor disability (MD). The second aim was to examine if there were any differences in the locus of control in these two groups of mothers. The sample consisted of 34 mothers of children with ID and 25 mothers of children with MD, of different age, levels of education and income level. We used Parent Locus of Control Scale-short form to assess parental locus of control. It was found that with the increase in maternal age, level of education and the income level, the tendency of moving locus of control inward was increased. There were no statistically significant differences in the locus of control in mothers of children with ID and mothers of children with MD ( $t = 0.603$ ,  $df = 47$ ,  $p = 0.531$ ). Influencing the change of personal beliefs and perceptions of stressful situations as a way of empowering parents can have positive outcome in child development.

*Key words: parental locus of control, socio-demographic variables, mothers of children with intellectual disability, mothers of children with motor disability*

## RAZLIKE U STRATEGIJAMA PREVLAĐAVANJA STRESA KOD RODITELJA DECE S POREMEĆAJEM AUTISTIČKOG SPEKTRA I DECE TIPIČNOG RAZVOJA

Mia Čarakovac\*\*<sup>a</sup>, Ivona Milačić Vidojević<sup>b</sup>

<sup>a</sup>USZ Centar za specijalističke socijalne usluge „Čuperak”, Kozarska Dubica, RS, Bosna i Hercegovina

<sup>b</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Podizanje deteta sa poremećajem iz spektra autizma (PAS) predstavlja izazov za roditelje, kada je potrebno da roditelji nađu načine za prevladavanje stresa, kako bi za svoje dete obezbedili što bolje uslove za razvoj i odrastanje i zadržali porodično blagostanje. Cilj istraživanja je bio da se utvrde razlike u strategijama prevladavanja stresa kod roditelja dece s PAS i dece tipičnog razvoja (TR). Uzorak se sastojao od 44 roditelja koji imaju dete sa PAS i 47 roditelja dece TR. Da bismo utvrdili razlike u strategijama prevladavanja stresa koristili smo Skalu odnosa porodice prema krizi (Family Crisis Oriented Personal Scales – F-COPES, McCubbin, Olson, & Larsen, 1981; Mitić, 1997). Rezultati pokazuju da je strategija kojom se obe grupe roditelja najviše koriste u stresnim situacijama strategija redefinisanja problema. Na sledećem mestu nalazi se traženje pomoći od socijalne sredine, zatim sledi pasivno prevladavanje, traženje pomoći od stručnjaka i na kraju duhovna podrška. U strategijama za prevladavanje stresa jedina značajna razlika, između roditelja dece s PAS i roditelja dece TR je otkrivena u slučaju traženja pomoći od stručnjaka. Roditelji dece s PAS češće koriste pomoć stručnjaka. S obzirom na to da roditelji dece sa PAS podršku najčešće traže od stručnjaka i stručnih službi, potrebno je ovu pomoć organizovati na način koji najbolje zadovoljava potrebe roditelja ove dece.

*Ključne reči: roditelji dece sa poremećajem iz spektra autizma, roditelji dece tipičnog razvoja, strategije prevladavanja stresa*

---

\*\* miamikica@yahoo.com

## DIFFERENCES IN COPING STRATEGIES OF PARENTS OF CHILDREN WITH AUTISM SPECTRUM DISORDER AND PARENTS OF TYPICALLY DEVELOPING CHILDREN

Mia Čarakovac<sup>a</sup>, Ivona Milačić Vidojević<sup>b</sup>

<sup>a</sup>Center for Specialized Social Services "Čuperak", Kozarska Dubica, RS, Bosnia and Herzegovina

<sup>b</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

Parents of children with autism spectrum disorder (ASD) use coping strategies that help them to tackle the challenging situations of raising their child. Parents need to find ways to overcome stress in order to provide their child with the best conditions for development and growth and to maintain family well-being. The aim of the study was to determine the differences in coping strategies in parents of children with ASD and parents of typically developing children (TD). The sample consisted of 44 parents of children with ASD and 47 parents of TD children. To determine differences in strategies for overcoming stress, we used Family Crisis Oriented Personal Scales – F-COPES. The results show that both groups of parents most often used the problem redefining strategy followed by the strategies of social support-seeking, passive overcoming, seeking help from experts and finally the spiritual support. In strategies for overcoming stress, the only significant difference between the group of parents of children with ASD and parents of TD children was determined in the case of seeking help from experts. Given that parents of children with ASD most often asked support from professionals and professional services, this assistance should be organized in a way that best meets the needs of the parents of these children.

*Key words: parents of children with autism spectrum disorder, parents of typically developing children, coping strategies*

# POREMEĆAJI U PONAŠANJU BEHAVIORAL DISORDERS

---

## TRANSFORMACIJA VASPITNIH INSTITUCIJA U PROFESIONALNI CENTAR

Mitja Krajčan\*\*

Univerza na Primorskem – Pedagoška fakulteta, Koper, Slovenija

U Sloveniji je osmišljen koncept transformacije vaspitnih ustanova u profesionalne centre, uz pomoć sredstava iz Evropskog socijalnog fonda. Centar ekspertize osmišljen je u skladu sa regionalnim principom, koji ima fleksibilne mogućnosti kreiranja programa u skladu sa potrebama dece i adolescenata u zajednici. Dve vaspitne ustanove (Maribor i Planina) finansirale su sveobuhvatni program ekspertskog centra, pri čemu smo ocenjivali kvalitet, funkcionalnost i pogodnost programa, njihovu koherentnost i kontinuitet tokom programa kroz evaluaciju klastera (evaluacija pojedinačnih programa, kao i njihova korelacija na vertikalnom i horizontalnom nivou) dve godine. Pomoću polustrukturiranih intervjuja (svi akteri: deca i adolescenti, vaspitači, uprava, roditelji, nastavnici, socijalni radnici i dečji psihijatri), analize dokumentacije, koncepata i zapažanja, postigli smo vrlo ohrabrujuće rezultate kroz kvalitativnu metodologiju. Programi dnevnih centara, rezidencijalnih grupa, grupa sa specifičnim programima, rad sa porodicom, mobilne usluge, terapije sa životinjama, dijagnostički centar, život na farmama, smeštaj za mlade, hortikulturni programi, intenzivni programi pokazali su veću funkcionalnost i efikasnost. Oni su respozivniji na potrebe ciljnih grupa, koje ostaju u istom društvenom okruženju i imaju priliku da se potpuno i sveobuhvatno umreže svim značajnim subjektima dece i adolescenata. Oba centra su takođe osnova za promenu zakonodavstva koja će uskoro stupiti na snagu. Takođe, naglašavamo da smo u ova dva slučaja uspeli da dokažemo da fleksibilni oblici pomoći profesionalcima olakšavaju reagovanje na potrebe dece i adolescenata koje donosi novo vreme postmodernizma. Fokus je stavljen na potrebe i prava dece i adolescenata na odgovarajuću pomoć, jer su se do sada deca i adolescenti morali prilagoditi rigidnoj institucionalizaciji, koja već ima prilično stare korene.

*Ključne reči: vaspitna ustanova, profesionalni centar, deca i adolescenti sa poremećajima u ponašanju i emocionalnim teškoćama, socijalno pedagoška pomoć usmerena na životni prostor*

---

\*\* Mitja.Krajncan@pef.upr.si



## FROM RESIDENTIAL CARE INSTITUTION TO PROFESSIONAL CENTER

Mitja Krajnčan

*University of Primorska – Faculty of Education, Koper, Slovenia*

In Slovenia, we have developed the concept of transforming the residential care institutions into professional centers with the help of the European Social Fund. The professional center is designed according to the regional principle, which has flexible possibilities for designing programs according to the needs of children and adolescents in the community. Two residential care institutions (Maribor and Planina) have had their entire program as a professional center financed, where with the help of a cluster evaluation (assessment of individual programs, as well as their connection on the vertical and horizontal level), we evaluated the quality, functionality and suitability of the programs, their connection and transitivity during the period of two years. By using semi-structured interviews (everyone involved, i.e. children and adolescents, educators, the management, parents, teachers, social workers and pedopsychiatrists), as well as documentary, conceptual and observational analysis, the qualitative methodology led us to extremely encouraging results. The programs of day centers, residential groups, groups with specific programs, mobile services, family work, animal therapy, diagnostic centers, farm life, youth housing, horticultural programs and intensive programs have revealed higher functionality and efficiency. They are more responsive to the needs of the target groups who remain in the same social environment and have the opportunity of network-like comprehensive help for all subjects important for children and adolescents. Both professional centers are also the basis for amending legislation, which will soon enter into force. We would also like to highlight the importance which we were able to prove with these two examples, namely that with flexible forms of help, professionals can respond to the needs of children and adolescents, brought by the modern times of postmodernism, in a much easier way.

*Key words: residential care institution, professional center, children and adolescents with emotional and behavioral problems, social pedagogical help directed towards living space*

## ASSUMPTIONS THAT INFLUENCE THE IMPLEMENTATION OF PARTICIPATION IN RESIDENTIAL TREATMENT

Mateja Marovič\*\*, Ana Bogdan Zupančič

*University of Primorska – Faculty of Education, Koper, Slovenia*

The establishment of participatory processes in the field of institutional education represents a demanding, ambivalent process – torn between the educational and supervisory function of an institutional care and the participation of the placed population – which in both theory and practice of social-pedagogical activity represents a special conceptual-pedagogical challenge. The reasons for this thesis arise mainly from the synthesis of complex factors of this type of population, which for various reasons (for example: impossibility of observing rules/agreements; resistance to authority; violations of socially valid norms, etc.) generally do not speak in favor of constructive co-creation of one's own life (both in the institution and outside), but the immediate satisfaction of one's needs is in the forefront (Marovič, 2013, in Marovič, Bajželj, & Krajnčan, 2014). The article analyzes in detail the framework components that are crucial in introducing participatory processes into the field of institutional education. On the basis of various research and direct work with the institutional population, in the context of procedural and personal assumptions, the paper focuses on those components that influence the establishment of participatory processes in extra-family institutional care. From the conceptual aspect of functioning of the educational institution and the involvement of the individual in various participatory processes that are present in the everyday life of the institution, we more precisely define those which significantly correlate with the inclusion of the child/adolescent not only in the life and work of the educational institution, but – in view of the fundamental goal of the institutional education – also with successful (re)integration into the normal living environment. At the same time, we defend the thesis that participation as one of the social-pedagogical concepts of help can only work if it is placed in the entire concept of institutional activity.

*Key words: participation, implementation, educational institution, emotional and behavioral difficulties and/or disorders*

---

\*\* mateja.marovic@pef.upr.si

## DISCUSSING THE SOCIAL, COMMUNAL AS AN OPPORTUNITY FOR SOCIAL PEDAGOGY

Ana Bogdan Zupančič\*\*, Mateja Marovič

*University of Primorska – Faculty of Education, Koper, Slovenia*

New age social/humanistic discussions, mainly in the sociological and philosophical field, are starting to question the role and meaning of community in education. Neoliberalism, together with capitalism and emphasizing the individual, can in its extreme lead to complete isolation of an individual who is entirely responsible for his own fate. The questions, which open the social field and relate to the context, life circumstances and numerous other social factors, stress the role and meaning of the community and society in the life of each member as well. In a unique way social pedagogy can provide the answers to these questions as it is an idea (science) constituted on the relationship and tensions between the individual and community, society. As such it is always embedded in the sociopolitical activities and individual national contexts. However, because of its socially- critical reflexive stance social pedagogy always warns about social inequalities, social injustice and structural violence. The added value of this practical science is definitely in the fact that it does not adopt this stance only through emancipatory theoretical considerations (due to the lack of theoretical discussions this is actually done seldom) but through concrete activities in a very diverse and holistic social pedagogical practice. Theoretical and comparative analysis is used to research the potential of social pedagogy as a science and practice in modern neoliberalism and turbo-capitalist society. Social pedagogy is defined as an alternative to the extremely individualized pedagogy – which disables (social and other) contextual insights - and other related disciplines and we show possible applications of this alternative mostly in the field of education and schooling.

*Key words: social pedagogy, community, education*

---

\*\* ana.bogdan.zupancic@pef.upr.si

## MONITORING AND EVALUATION OF EXPERT CENTER MARIBOR

Matej Vukovič<sup>\*\*a</sup>, Mitja Krajncan<sup>a</sup>, Friedhelm Peters<sup>b</sup>

<sup>a</sup>University of Primorska – Faculty of Education, Koper, Slovenia

<sup>b</sup>Fachhochschule Erfurt – Fakultät Angewandte Sozialwissenschaften, Erfurt, Germany

In the framework of the ESS project, we have been monitoring and evaluating the development of Expert center Maribor. The process of deinstitutionalization is being performed with this ESS project, which is linked to the regionalization, participation and social pedagogical assistance directed towards the life of youngsters, with a differentiated offer according to the needs of the regional space. The evaluation includes several stages of monitoring the project (from 1<sup>st</sup> Sept. 2017 to 31<sup>st</sup> Aug. 2019). The implementation and effects are analyzed with cluster evaluation and triangulation. The evaluation is de facto related to the project phases and is pragmatically linked to process actors who participate in the project in one way or another (as providers and users). Cluster evaluation is a form of evaluation of programs which have a common carrier, while individual projects are relatively independent and different in terms of strategies, contexts, methods, users, and other. Cluster evaluation thus works on a formative level (the evaluation of aid forms with the aim of improving programs and approaches) and at a summarizing level (the evaluation of balance sheets with the goal of evaluating the program). Therefore, formative evaluation takes place through all the phases of the project, as in all the “branches”, where new programs or methods were introduced into previous programs. Of course, the final report of each “branch” is specific and common for the entire institution. The empirical foundation of the evaluation is based on triangulation, where we check the effectiveness of the project through various aspects, using different forms and methods. This includes interviews with various addressees (children, parents, educators, leaders, pedopsychiatrists, etc.), case studies, documentation analysis, 4 analyses of a case study and a survey on implementation, efficiency and obstacles in the project. The project will also raise legal issues related to vision and financing, also in order to ensure the sustainability of the project.

*Key words: monitoring, deinstitutionalization, participation*

---

<sup>\*\*</sup> matej.vukovic@pef.upr.si

## MOGUĆNOSTI UNAPREĐENJA REZILIJENTNOSTI DECE BEZ RODITELJSKOG STARANJA NA REZIDENCIJALNOM SMEŠTAJU

Marija Nešić\*\*, Branislava Popović Čitić

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Rezidencijalni smeštaj, kao oblik alternativnog staranja, predstavlja krajnje sredstvo za decu koja ne mogu ostati u svojim porodicama ili biti zbrinuta u okruženju druge porodice. Ova deca su, pored gubitka ili odvajanja od roditelja, doživela niz traumatskih događaja, primarno vezanih za zlostavljanje i zanemarivanje u biološkim porodicama. Doživljena traumatska iskustva, na koja se nadovezuje smeštaj u ustanovu, predstavljaju ozbiljan rizik za različite probleme ponašanja i teškoće u funkcionisanju. Otuda se unapređivanje rezilijentnosti, kao sposobnosti uspešnog prevazilaženja posledica životnih nedaća i postizanja pozitivnih razvojnih ishoda u situacijama rizika, smatra posebno značajnim za decu koja odrastaju u uslovima rezidencijalnog smeštaja. Na osnovu analize rezultata različitih istraživačkih studija, izdvojeni su faktori koji ostvaruju protektivno dejstvo i doprinose razvoju rezilijentnosti kod dece na rezidencijalnom smeštaju, a to su: vezivanje, emocionalna regulacija, odnosi sa siblizima, odgovornost, talenti i snage, obrazovanje i prijateljstva. U radu će, kroz prikaz intervencija kojima je moguće osnažiti ove faktore (održavanje uspostavljenih pozitivnih veza sa okruženjem, razvijanje veština kontrole emocija, održavanje odnosa sa bratom ili sestrom, pružanje mogućnosti odlučivanja i izbora, održavanje postojećih interesovanja i podsticanje novih, motivisanje i postavljanje visokih očekivanja i održavanje postojećih i sklapanje novih prijateljstava), biti sagledano protektivno svojstvo ovih faktora, kao i njihov doprinos na planu jačanja rezilijentnosti.

*Ključne reči: rezilijentnost, deca bez roditeljskog staranja, rezidencijalni smeštaj, protektivni faktori*

---

\*\* marija87markovic@yahoo.com

## OPPORTUNITIES FOR ENHANCING THE RESILIENCE OF CHILDREN WITHOUT PARENTAL CARE IN RESIDENTIAL CARE

Marija Nešić, Branislava Popović Ćitić

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Residential care, as a form of alternative care, represents the last resort for children who cannot stay in their families or be taken care of in the environment of another family. In addition to losing or being separated from parents, these children have experienced a number of traumatic events related to abuse and neglect in biological families. Experienced traumatic experiences, to which accommodation at an institution is added, represent a serious risk to various behavioral problems and difficulties in functioning. Hence, the improvement of resilience, as the ability to successfully overcome the consequences of life adversity and achieve positive development outcomes in risk situations, is especially important for children who are growing up in residential care. Based on the analysis of the results of various research studies, factors that achieve protective effect and contribute to the development of resilience in children at residential care are: attachment, emotional regulation, relationships with siblings, responsibilities, talents and strengths, education and friendships. In this paper, through the presentation of interventions that can strengthen these factors (maintaining positive relationships with the environment, developing emotional control skills, maintaining relationships with a brother or sister, providing opportunities for decision and choices making, maintaining existing interests and encouraging new ones, motivating and setting high expectations and maintaining existing and making new friendships), the protective nature of these factors, as well as their contribution to the plan of strengthening resilience will be considered.

*Key words: resilience, children without parental care, residential care, protective factors*

## POLNE I UZRASNE SPECIFIČNOSTI SLIKE O SEBI ADOLESCENATA NA SMEŠTAJU U USTANOVAMA SOCIJALNE ZAŠTITE\*

Marija Stojanović\*\*, Vesna Žunić Pavlović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Osnovni cilj istraživanja je sagledavanje specifičnosti polnih i uzrasnih razlika u pogledu slike o sebi kod adolescenata na smeštaju u ustanovama socijalne zaštite, u odnosu na adolescente iz opšte populacije. Uzorkom je obuhvaćeno 47 adolescenata na smeštaju u ustanovama socijalne zaštite i 271 adolescent iz opšte populacije, uzrasta 14-18 godina, oba pola. Za procenu slike o sebi primenjena je Pirs-Harisova skala self-koncepta za decu. Rezultati ukazuju da kod adolescenata na smeštaju u ustanovama socijalne zaštite ne postoje statistički značajne polne razlike u skorovima, dok su u poduzorku adolescenata iz opšte populacije zabeležene statistički značajne polne razlike u skorovima na podskalama Prilagođenost ponašanja ( $t = -2,11$ ;  $df = 266,15$ ;  $p < 0,05$ ), Oslobođenost od anksioznosti ( $t = 5,89$ ;  $df = 248,37$ ;  $p < 0,01$ ), Popularnost ( $t = 2$ ;  $df = 269$ ;  $p < 0,05$ ), kao i na Ukupnom skoru ( $t = 2,36$ ;  $df = 269$ ;  $p < 0,05$ ). U poduzorku adolescenata na smeštaju u ustanovama socijalne zaštite nije evidentirana statistički značajna povezanost uzrasta ispitanika i skorova na datom instrumentu, dok je kod adolescenata iz opšte populacije registrovana statistički značajna povezanost uzrasta ispitanika i skorova na podskalama Intelektualni i školski status ( $r = -0,15$ ;  $p < 0,05$ ) i Sreća i zadovoljstvo ( $r = -0,15$ ;  $p < 0,05$ ), kao i na Ukupnom skoru ( $r = -0,15$ ;  $p < 0,05$ ). Dobijeni nalazi upućuju na izvesna odstupanja u polnim i uzrasnim razlikama u pogledu slike o sebi kod adolescenata na smeštaju u ustanovama socijalne zaštite, što se može pripisati delovanju različitih nepovoljnih faktora, karakterističnih za ovu populaciju.

*Cljučne reči: adolescenti, slika o sebi, ustanove za smeštaj, polne razlike, uzrasne razlike*

\* Rad je nastao kao rezultat istraživanja na projektima „Socijalna participacija osoba sa intelektualnom ometenošću“ (br. 179017) i „Kriminal u Srbiji: fenomenologija, rizici i mogućnosti socijalne intervencije“ (br. 47011), koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* s.marija1994@gmail.com

## SEX AND AGE SPECIFICS OF SELF-IMAGE OF ADOLESCENTS FROM RESIDENTIAL CARE FACILITIES\*

Marija Stojanović, Vesna Žunić Pavlović

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

The main goal of the research was to observe sex and age differences in the self-image of adolescents from residential care facilities, compared to adolescents from general population. The sample included 47 adolescents from residential care facilities and 271 adolescents from general population, ages 14-18, of both sexes. The Piers-Harris Children's Self-Concept Scale was used for the assessment of self-image. The results show that there were no statistically significant sex differences in adolescents from residential care facilities, while in the subsample of adolescents from general population, statistically significant sex differences were observed in the scores on the subscales: Behavior Adjustment ( $t = -2.11$ ;  $df = 266.15$ ;  $p < 0.05$ ), Freedom from Anxiety ( $t = 5.89$ ;  $df = 248.37$ ;  $p < 0.01$ ), Popularity ( $t = 2$ ;  $df = 269$ ;  $p < 0.05$ ) as well as in the Total score ( $t = 2.36$ ;  $df = 269$ ;  $p < 0.05$ ). In the subsample of adolescents from residential care facilities there was no statistically significant correlation between the age of the respondents and the scores on the instrument, while in adolescents from general population a statistically significant relation was determined between the respondents' age and the scores on the subscales Intellectual and School Status ( $r = -0.15$ ;  $p < 0.05$ ) and Happiness and Satisfaction ( $r = -0.15$ ;  $p < 0.05$ ), as well as in the Total Score ( $r = -0.15$ ;  $p < 0.05$ ). The obtained findings point to deviations in sex and age differences in the self-image of adolescents from residential care facilities, which can be attributed to the activity of various adverse factors, characteristic of this population.

*Key words: adolescents, self-image, residential care facilities, sex differences, age differences*

---

\* This paper is a result of the projects "Social Participation of Persons with Intellectual Disability" (No. 179017) and "Crime in Serbia: Phenomenology, Risks and the Possibilities of Social Intervention" (No. 47011), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.



## ZAŠTITA DECE ŽRTAVA I SVEDOKA U KRIVIČNOM POSTUPKU

Ivana Milosavljević Đukić\*\*

Centar za zaštitu odojčadi, dece i omladine, Beograd, Srbija  
Visoka škola socijalnog rada, Beograd, Srbija

Predmet ovog rada je sagledavanje aktuelnog položaja dece žrtava i svedoka u krivičnom postupku u Republici Srbiji. Cilj rada je da se predstavi primena zakonskih rešenja u praksi kroz osnivanje Jedinice za podršku deci žrtvama i svedocima u krivičnom postupku. Zaštita dece žrtava i svedoka u krivičnim postupcima, ne znači samo zaštitu od sekundarne viktimizacije i patnje tokom učešća u postupku, već i povećanje detetove sposobnosti da doprinese tom istom postupku. To znači da posebnu pažnju treba posvetiti ravnoteži između prava na zaštitu, prava na izražavanje stavova i prava na učešće. Kako bi obezbedila ovo pravo dece, Srbija poslednjih nekoliko godina sprovodi sveobuhvatnu reformu pravosuđa i sistema socijalne zaštite i rad ovih sistema pokušava da uskladi sa međunarodnim i evropskim standardima. Uzimajući u obzir razvojne specifičnosti dece, država Srbija je kroz projekat „Unapređenje prava deteta kroz jačanje sistema pravosuđa i socijalne zaštite“ razvijala usluge za smanjenje sekundarne viktimizacije kroz formiranje Jedinice za podršku deci žrtavama i svedocima u krivičnom postupku. Ovaj projekat je trebalo da obezbedi punu implementaciju zakona u praksi ali se to nije dogodilo s obzirom na to da je Srbija završetkom projekta prestala da finansira Jedinicu. U aktuelnom trenutku država nema odgovor na koji način će obezbediti pravo dece na učešće i zaštitu u krivičnom postupku i na koji način će angažovati profesionalce obučene za pružanje podrške deci žrtvama i svedocima.

*Ključne reči: deca, žrtve, svedoci, krivični postupak*

---

\*\* imdjukic@gmail.com

## PROTECTION OF CHILD VICTIMS AND WITNESSES IN CRIMINAL PROCEEDINGS

Ivana Milosavljević Đukić

*Center for Protection of Infants, Children and Youth, Belgrade, Serbia  
The College of Social Work, Belgrade, Serbia*

The topic of this paper perceives the current position of children victims and witnesses in criminal proceedings in the Republic of Serbia. The goal of the paper is to present the application of legal solutions in practice through the establishment of the Unit for support of children victims and witnesses in criminal proceedings. Protection of child victims and witnesses in criminal proceedings does not entail only protection from secondary victimization and suffering during participation in the proceedings, but also the increase of a child's ability to contribute to those proceedings. This means that special attention should be given to the balance between the right to protection, right to express their attitudes and the right of participation. In order to provide these rights for children, Serbia has been implementing a comprehensive reform of the judiciary system and social protection system in recent years and has been trying to align the operation of these systems with international and European standards. Taking into consideration the developmental specificities of children, Serbia was, through the project "Improvements to the rights of a child through strengthening the judiciary and social protection system", developing services for reduction of secondary victimization through formation of the Unit for support of children victims and witnesses in criminal proceedings. This project was supposed to provide full implementation of laws in practice. However, this did not happen given the fact that Serbia ceased to fund the Unit upon the completion of the project. At this time, the state does not have the answer on how to provide the right of children to participation and protection in criminal proceedings and how to hire the professionals trained to provide support to child victims and witnesses.

*Key words: children, victims, witnesses, criminal proceedings*

## RESTORATIVNA PRAVDA I REAKCIJA NA MALOLETNIČKU DELINKVENCIJU – UPOREDNOPRAVNA ISKUSTVA\*

Milica Kovačević\*\*

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

U duhu preovlađujućih ideja o potrebi diverzionog i neinvazivnog postupanja prema maloletnim prestupnicima, primena mera restorativne pravde sve više dobija na značaju. Ne samo da postoji snažno konceptualno opredeljenje za što širu primenu restorativnog pristupa, već i sve veći broj empirijskih istraživanja ukazuje na njegove pozitivne efekte, posebno u pogledu suzbijanja recidivizma. I pored navedenog, uočava se tek skroman porast broja primenjenih restorativnih mera iz godine u godinu, što važi kako za Srbiju, tako i za neke zemlje iz našeg bližeg i daljeg okruženja. Čini se da praktični problemi u implementaciji dominantno utiču na to da restorativne mere ne budu primenjene na širi i sadržajni način. Stoga su izlaganja u radu posvećena upoznavanju kako normativnih okvira, tako i praktičnih iskustava u primeni mera restorativnog karaktera u Hrvatskoj, Austriji i drugim državama. Cilj rada jeste da se na osnovu izvršene analize izdvoje određene preporuke koje bi bile primenljive u Srbiji.

*Ključne reči: maloletnička delinkvencija, restorativna pravda, diverzioni model, Srbija*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Razvoj metodologije evidentiranja kriminaliteta kao osnova efikasnih mera za njegovo suzbijanje i prevenciju“ (br. 179044), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* bucak80@gmail.com

## RESTORATIVE JUSTICE AND JUVENILE DELINQUENCY – COMPARATIVE LAW REVIEW\*

Milica Kovačević

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Nowadays, with the ideas about diversion and non-invasive measures as best possible solutions for the treatment of juvenile offenders, the concept of restorative justice gains special importance. There is a strong conceptual commitment to the widespread use of the restorative approach and there is also an increasing number of empirical surveys that point to its positive effects, especially in terms of suppressing recidivism. Despite this, only a modest increase has been observed in the number of applied restorative measures, which one could say for Serbia as well as for some other countries. It seems that problems in the sphere of practical implementation dominantly affect the state in which restorative measures simply do not get to be applied in a wider and more meaningful way. Therefore, the paper is devoted to the analysis of normative frameworks and practical experiences in the application of restorative measures in Croatia, Austria and other countries. The aim of the paper is to point out certain recommendations that could be applicable in The Republic of Serbia.

*Key words: juvenile delinquency, restorative justice, diversion model, Serbia*

---

\* This paper is a result of the project “Development of Crime Recording Methodology as a Basis for Effective Measures for the Suppression and Prevention of Crime” (No. 179044), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## ZATVOR IZMEĐU UTOPIJE I DISTOPIJE

Goran Jovanić\*\*, Vera Petrović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Zatvorska praksa se sve više oslanja na upotrebu računarske tehnike, video nadzora, uređaja za kontrolu kretanja osoblja i osuđenih, upotrebu čipovanih magnetnih kartica, senzora pokreta, infracrvenih kamera i komunikacionih uređaja. Visoki zidovi, kontrolni tornjevi, žičane ograde, masivna vrata, rešetke i stražari, lisice i lanci, dodatna su sredstva za održavanje reda i predupređenje bekstva ili nereda u zatvoru. Ističu se uštede u troškovima i smanjena potreba za obučanim stražarima. Nastojanje da se situacija u zatvoru drži pod maksimalnim stepenom kontrole daje verifikaciju Gofmanovim tumačenjima totalnih ustanova, a u aktuelnom vremenu mogu se uočiti paralele sa zapažanjima Pjera Burdijea i Loika Vakana o urbanoj marginalnosti, kaznenoj politici i praksi nasuprot Garlandovim zalaganjima za penalni velfarizam. Distopijski karakter zatvora skoro da prevazilazi Orvelova futuristička predviđanja okruženja koje ima za cilj totalnu kontrolu, kako osuđenih, tako i zaposlenih. Utopijska nastojanja za detekcijom uzročnika kriminaliteta i njihovom eliminacijom putem resocijalizacijskog tretmana, sukcesivno su ustupala mesto novim penološkim tendencijama koje se fokusiraju na menadžment rizika recidivizma i očuvanje bezbednosti zajednice, pojačanom i produženom kontrolom prestupnika i nakon izlaska iz zatvora. Konsekvencijalizam prevladava u odnosu na deontologiju, a pooštavanje kaznene politike i masovna inkarceracija dovode do preopterećenosti zatvorskih kapaciteta, što za posledicu ima preusmeravanje aktivnosti na očuvanje bezbednosti i redukovanje tretmana usmerenih na dinamičke faktore recidivizma. Stigmatizacija usled inkarceracije otežava postpenalnu reintegraciju, te se povratak kriminalnom načinu života čini izvesnijim, što potvrđuju visoke stope recidivizma. Utopijska očekivanja od zatvorskog kažnjavanja devastirana su uticajem distopijskog zatvorskog okruženja. Predmet rada je prikaz savremene prakse izvršenja kazne zatvora. Cilj rada je da se ukaže na diskrepancu očekivanja i realnih mogućnosti postizanja efekata kod osuđenih lica.

*Ključne reči: kaznena politika, osuđeni, totalne institucije, recidivizam*

---

\*\* goranjovanic@fasper.bg.ac.rs

## PRISON BETWEEN UTOPIA AND DYSTOPIA

Goran Jovanić, Vera Petrović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Modern practice of prison sentence serving has been increasingly reliant on the usage of computer techniques, video surveillance, devices for monitoring staff and convicts' movements, use of chipped magnetic-stripe cards, motion detectors, infra-red cameras and communication devices. High outer walls, control towers, barb-wire fences, massive doors, bars and guards, hand-cuffs and chains are all additional means to maintain order and hinder escape or prison riots. Cuts in ongoing expenses are evident, as well as the reduction in need for trained guards. The endeavor for prison situation to be kept under maximum control verifies Goffman's interpretation of total institutions, and modern times see parallels between observations of Pierre Bourdieu and Loic Wacquant on urban marginality, penal politics and practice in contrast to Garland's penal-welfarism. The dystopian character of prison almost surpasses Orwell's futuristic predictions of an environment which serves for total control of its convicts and employees alike. Utopian efforts for detection of causes of crime and their elimination with the means of re-socialization treatment have successively given away to new penal tendencies focused on recidivism risk management and maintenance of safety of the community by stricter and prolonged control over the offenders after they have been released from prison. Consequentialism dominates over deontology, while stricter penal politics and mass incarceration lead to overpopulation of prison capacities, which, in turn, causes activities to shift to security maintenance and reduction of treatments concentrated on dynamic recidivism factors. The stigmatization owing to their incarceration hinders their post-penal reintegration, thus the return to their criminal way of life seems more likely, as it is confirmed by high recidivism levels. Utopian expectations from prison punishments have been devastated by the effect of dystopian prison environment. The subject of this paper is to present the contemporary practice of imprisonment. The aim is to point out the discrepancy between expectations and real possibilities of achieving effects in prisoners.

*Key words: penal policies, convicts, total institutions, recidivism*

## POVEZANOST NIVOVA EMPATIJE I UČESTALOSTI RECIDIVA KOD OSUĐENIH LICA

Mirjana Vidaković\*\*

*Okružni zatvor u Subotici, Subotica, Srbija*

Cilj ovog istraživanja je bio utvrđivanje povezanosti između nivoa empatije kod osuđenih lica i učestalosti recidiva, odnosno, da li stepen sposobnosti za empatiju doprinosi tome da lica sklona kriminalnom ponašanju, nakon što budu osuđena zatvorskom kaznom, počine novo krivično delo. Uzorak je činilo 81 osuđeno lice za krivično delo, muškog pola, koji su se u vreme istraživanja nalazili u Okružnom zatvoru u Subotici. Procena empatije je izvršena Upitnikom za procenu spremnosti za empatiju, EMI-upitnik (Genc, Mitrović, & Čolović, 2009). Recidiv osuđenih lica u izvršenju krivičnih dela je meren ukupnim brojem izrečenih presuda, brojem presuda kojima su osuđeni na zatvorske kazne i brojem povrata na izdržavanje kazne u zatvor. U statističkoj obradi podataka je korišćena metoda višestruke regresije. Rezultati istraživanja su potvrdili da postoji statistički značajna povezanost ( $r = 0,086$ ,  $p < 0,05$ ) između jedne od dimenzije EMI-upitnika, odnosno dimenzije Empatija sa negativnim emocionalnim stanjima, kako sa brojem recidiva na izdržavanje kazne, tako i sa ukupnim brojem izrečenih zatvorskih kazni. Druge tri dimenzije: Empatija sa pozitivnim emocionalnim stanjima, Empatija kao socijalna uloga i Emocionalne reakcije isprovocirane empatijom nisu pokazale statistički značajnu povezanost. Dakle, rezultati ukazuju da osuđenici sa većim brojem izrečenih zatvorskih kazni imaju manju sposobnost za empatiju sa negativnim emocionalnim stanjima. Isti zaključak se mogao dobiti i na osnovu iskustvenog rada, gde je primećeno da postoji značajna distanciranost osuđenih lica od svojih oštećenih, tj. od spremnosti da empatišu sa patnjom koju su drugom naneli, odnosno koju oštećeni oseća. Na osnovu dobijenih rezultata istraživanja mogu se izvesti praktične implikacije za planiranje tretmana i sprovođenje programa sa osuđenim licima.

*Cljučne reči: empatija, osuđena lica, recidiv, tretman*

---

\*\* mvidakovic25@yahoo.com

## INTERCONNECTION BETWEEN LEVEL OF EMPATHY AND RECIDIVISM FREQUENCY IN CONVICTS

Mirjana Vidaković

*District Penitentiary in Subotica, Subotica, Serbia*

The aim of the conducted survey was to determine interconnection between the level of empathy and frequency of recidivism in convicts, or whether a level of capacity for empathy contributes to individuals being prone to criminal behavior commit a new criminal offense after being sentenced to prison. The sample consisted of 81 male individuals convicted of a criminal offense, who were at the time of the study at the District Penitentiary in Subotica. The empathy estimate was made by the Empathy assessment questionnaire, EMI-questionnaire (Genc, Mitrovic, & Colovic, 2009). Recidivism of convicted individuals for criminal offenses was measured by the total number of pronounced sentences, the number of prison sentences and the number of recidivity to serving sentences in prison. Methodology of multiple regression was used during the statistical processing of data. The results of the study confirmed that there was a statistically significant interconnection ( $r = 0.086$ ,  $p < 0.05$ ) between one of the dimensions of EMI-questionnaire, that is the Empathy with negative emotional states, both with the number of relapses to serving the sentence and with the total number of prison sentences. The other three dimensions: Empathy with positive emotional states, Empathy as a social role and Empathy provoked by emotional reactions did not show statistically significant interconnection. Thus, the results indicate that prisoners with a higher number of prison sentences have lower capacity for empathy with negative emotional states. The same conclusion could be obtained on the basis of the experience, where it was noticed that there was a considerable distancing of the convicts from their victims, that is from the readiness to empathize with the suffering they inflicted on the other or that the victim feels. Based on the obtained results of the research, practical implications could be derived for planning the treatment and conducting the programs with the convicted.

*Key words: empathy, convicts, recidivism, treatment*



## SOCIOMETRIJA KAO DIJAGNOSTIČKA I TERAPIJSKA METODA U PREVAZILAŽENJU OTPORA U GRUPI LEČENIH ALKOHOLIČARA

Marija Maljković<sup>\*\*a</sup>, Danica Bošković Đukić<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Institut za mentalno zdravlje Beograd, Klinika za bolesti zavisnosti, Beograd, Srbija

Aktuelni programi lečenja alkoholizma baziraju se na zavisniku i njegovoj porodici, sa različitim modalitetima primene porodične komponente. Metoda izbora u lečenju alkoholizma je grupna psihoterapija, a najviše primenjivana je multipla grupa bračnih parova i/ili multipla porodična grupa. Grupa je otvorenog tipa, po strukturi srednja psihosocioterapijska, uz primenu osnovnih principa grupnog rada. Grupna dinamika u mnogome zavisi od diferencijalne socijalne strukture, koja se može sagledati u sociometrijskom statusu pojedinaca. S obzirom da se u radu sa bolestima zavisnosti često javljaju otpori, krize i zastoji u lečenju, smatramo da se unapređenjem i boljim razumevanjem statusa članova grupe i njihovih međusobnih odnosa, mogu prevazići ovi zastoji. Njihovo prevazilaženje predstavlja put ka promeni, a svaka stagnacija put ka recidivu. Predmet rada je analiza mogućnosti primene sociometrije kao dijagnostičke i terapijske metode u prevazilaženju otpora u grupi. Cilj rada je da se kroz prikaz rezultata istraživanja, ukaže na mogućnost primene terapijskih intervencija koje rezultiraju smanjenjem ili prevazilaženjem otpora u grupi. Istraživanje je sprovedeno u januaru 2019., a ponovljeno u maju 2019. godine, u Dnevnoj bolnici za bolesti zavisnosti „Dr Branko Gačić“, Instituta za mentalno zdravlje u Beogradu. Uzorkom je obuhvaćena rehabilitaciona grupa ženskog alkoholizma (žene pacijenti i njihovi srodnici/ kopacijenti), koju je sačinavalo 25 članova. Istraživanje je sprovedeno korišćenjem sociometrijskog upitnika, koji se sastojao od 4 kriterijuma izbora i samoprocene. Rezultati istraživanja prikazani kroz indekse prihvatanja i odbacivanja, grafičke prikaze i analizu, korišćeni su u radu sa članovima grupe u periodu nakon prvog testiranja. Kontrolno testiranje sprovedeno nakon četiri meseca aktivnog rada sa grupom, pokazalo je unapređenje grupne dinamike kroz sledeće pokazatelje: veći broj uzajamnih pozitivnih biranja, manje izolovanih „usamljenih“ članova, kao i pozitivniju samoprocenu. Takođe, članovi grupe bili su više motivisani da se uključuju u rad grupe, dele lične sadržaje i pružaju podršku drugim članovima grupe. Sagledavajući grupnu dinamiku možemo zaključiti da se primenom sociometrijskog upitnika, uz njegovu analizu sa članovima grupe, smanjila učestalost otpora i zastoja u lečenju pacijenata, paralelno i u grupnom radu. Sociometrijsku metodu možemo koristiti kao terapijsku tehniku u načinu prevazilaženja otpora u terapijskom procesu.

*Ključne reči: sociometrija, alkoholizam, otpori, krize, lečenje*

\*\* mara.maljkovic@gmail.com

## SOCIOMETRY AS A DIAGNOSTIC AND THERAPY METHOD IN PREVAILING OUTPUT IN A LABOR ALCOHOLIC GROUP

Marija Maljković<sup>a</sup>, Danica Bošković Đukić<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Institute of Mental Health in Belgrade, Day Hospital for Alcoholism and other addictions, Belgrade, Serbia

The current programs for the treatment of alcoholism are based on the addict and his family, with different modes of application of the family component. The method of choice in the treatment of alcoholism is group psychotherapy, and the most common is the multiplicity of married couples and/or multiple family groups. The group is an open type, the middle psychosociotherapeutic one with regard to structure, with the application of the basic principles of group work. Group dynamics largely depends on the differential social structure, which can be perceived in the sociometric status of individuals. Since resistance, crises and congestion problems often arise in the treatment of addiction diseases, we consider that these congestions can be overcome by improving and understanding the status of group members and their relationships. Their overcoming is the way to change, and every stagnation is the way to relapse. The subject of the paper is the analysis of the possibility of applying sociometry as a diagnostic and therapeutic method in overcoming resistance in the group. The aim of the paper is to illustrate the possibility of applying therapeutic interventions that result in reduction or overcoming resistance in the group through the presentation of the research results. The research was conducted in January 2019, and again in May 2019, in the Day Hospital for Alcoholism and Other Addictions "Dr Branko Gačić", Institute of Mental Health in Belgrade. The sample included the rehabilitation group of women's alcoholism (women patients and their relatives/co-patients), which was made up of 25 members. The research was conducted using a sociometric questionnaire, which consisted of 4 selection criteria and self-assessment. The results of the research presented through acceptance and rejection indices, graphic representations and analysis, were used in working with group members in the period after the first test. Control testing conducted after four months of active work with the group showed improvement in group dynamics through the following indicators: a larger number of mutual-positive dials, less isolated "lonely" members, and a more positive self-assessment. Also, members of the group were more motivated to get involved in the work of the group, share personal content and provide support to other members of the group. By looking at group dynamics, we can conclude that using a sociometric questionnaire, along with its analysis with group members, the frequency of resistance and delay in the treatment of patients decreased, in parallel and in group work. The sociometric method can be used as a therapeutic technique in the way of overcoming resistance in the therapeutic process.

*Key words: sociometry, alcoholism, resistance, crisis, treatment*

## PROCENA NEGATIVNIH POSLEDICA RAZVODA NA MALOLETNU DECU I MOGUĆE INTERVENCIJE\*

Danka Radulović\*\*, Natalija Ignjatović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Zbog rapidnog povećanja stope razvoda brakova u savremenom društvu, sve se veći broj maloletne dece suočava sa posledicama ovog stresnog životnog događaja. Stoga su u radu, na bazi analize relevantne empirijske građe, razmotreni negativni efekti razvoda na decu, faktori maladaptacije i moguće intervencije. Rezultati istraživanja, i pri kontroli varijabli u periodu pre razvoda roditelja, sistematski ukazuju na dva i po puta češću pojavu bihevioralnih, emocionalnih, psihosocijalnih, akademskih i drugih problema prilagođavanja kod dece i adolescenata čiji su roditelji razvedeni u odnosu na one iz nerazvedenih brakova (25% : 10%). Brojne studije dosledno potvrđuju da su dugoročni negativni efekti razvoda najviše povezani sa poremećajima u ponašanju, impulsivnošću i delinkvencijom dece, a potom i sa depresijom, anksioznošću, niskom samoprocenom, problemima u odnosima dece sa roditeljima (posebno sa roditeljem sa kojim ne žive), vršnjacima i figurama autoriteta, kao i sa nižim školskim postignućem, napuštanjem škole i drugim problemima (npr. sa tri puta češćim adolescentskim trudnoćama). U radu su izdvojeni empirijski verifikovani činioci značajni za predikciju dugoročno nepovoljnih posledica razvoda na dete (karakteristike deteta, odnos deteta i roditelja, konflikti među roditeljima, starateljstvo i kvalitet kontakta sa odsutnim roditeljem, novi brak roditelja i sl.), kao i pojedinačni faktori rizika i zaštite važni za predviđanje (ne)prilagođenosti. Takođe su prezentovane intervencije u radu sa decom, roditeljima i u zajednici, uz analizu raspoloživih istraživačkih nalaza o njihovoj efikasnosti. Zaključeno je da se okolnosti i negativne posledice razvoda, protektivni i riziko faktori moraju pažljivo individualizovano procenjivati imajući u vidu specifične potrebe pojedinačnog deteta, kako bi se obezbedila adekvatna intervencija. Razvod roditelja je za decu težak i bolan proces bez obzira na njihov uzrast, te se može očekivati da period prilagođavanja traje dve godine. Generalno, povoljnije efekte imaju intervencije usmerene na redukciju roditeljskih konflikata i promociju bliskosti dece i oba roditelja, poput medijacije, kao i suportivni programi u školama.

*Ključne reči: deca, adolescenti, razvod, maladaptacija, intervencije*

\* Rad je nastao kao rezultat istraživanja na projektima „Unapređivanje kvaliteta i dostupnosti obrazovanja u procesima modernizacije Srbije“ (br. 47008) i „Kriminal u Srbiji: fenomenologija, rizici i mogućnosti socijalne intervencije“ (br. 47011), koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* dankamr@gmail.com

## ASSESSMENT OF DIVORCE-RELATED NEGATIVE ISSUES ON MINOR CHILDREN AND POSSIBLE INTERVENTIONS\*

Danka Radulović, Natalija Ignjatović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Due to the rapid increase of the incidence of divorce in modern society a growing number of minor children are facing the consequences of this stressful life event. Therefore, based on the analysis of empirical studies, this paper considers negative effects of divorce on children, maladaptation factors and possible interventions. Research findings indicate that, even when variables before parental divorce are controlled, children and adolescents from divorced families are 2.5 times more likely to experience behavioral, emotional, psychosocial, academic and other adaptation problems compared to children and adolescents from nondivorced families (25% : 10%). A number of studies consistently show that long term negative effects of divorce are strongly related to conduct disorders, impulsivity and delinquency of children, as well as depression, anxiety, low self-esteem, problems with parent-child relationship (especially with nonresidential parent), in relations with peers and authority figures. Additionally, they are more likely to have lower academic achievements, drop out of school and have other problems (such as three times higher incidence of teen pregnancy). This paper examines empirically verified factors important for the prediction of long-term unfavorable consequences of divorce on children (child characteristics, parent child relationship, parental conflicts, parental custody, relationship quality with nonresidential parent, remarriage, etc.), as well as individual risk and protective factors important for predicting (mal) adjustment. Additionally, interventions focused on children, on parents and community-based interventions are presented, with the analysis of available research findings on their efficacy. It is concluded that conditions, negative effects, protective and risk factors of divorce need to be carefully and individually assessed having in mind the specific needs of the child, in order to provide a tailored intervention. Parental divorce is a difficult and painful process for children no matter of their age, so it is expected that the adaptation period lasts two years. Generally, interventions focused on the reduction of parental conflict and promotion of positive relations of the child with both parents, such as mediation and supportive programs in schools, show more favorable effects.

*Key words: children, adolescents, divorce, maladaptation, interventions*

---

\* This paper is a result of the projects "Improving the Quality and Accessibility of Education in Modernization Processes in Serbia" (No. 47008) and "Crime in Serbia: Phenomenology, Risks and the Possibilities of Social Intervention" (No. 47011), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## POVEZANOST PORODIČNE STRUKTURE SA INTERNALIZOVANIM I EKSTERNALIZOVANIM PROBLEMIMA ADOLESCENATA

Dragica Bogetic\*\*

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Kako porodična struktura predstavlja važan faktor za razvoj dece i adolescenata, cilj istraživanja je bio da se ispita povezanost porodične strukture (nepotpune, rekonstruisane i potpune porodice) i internalizovanih i eksternalizovanih problema adolescenata, odnosno, da se utvrde razlike u ispoljavanju problema adolescenata u zavisnosti od strukture porodice. Uzorak su činili učenici šestog i sedmog razreda osnovne škole (N = 101) i učenici svih razreda, dve srednje stručne škole (N = 160) u Beogradu, ukupno 261 ispitanik (51% ženskog pola). U okviru kratkog socio-demografskog upitnika, kreiranog za potrebe istraživanja, ispitana je struktura porodice adolescenata, dok su teškoće adolescenata ispitane pomoću četiri subskele Upitnika snaga i teškoća (Goodman, 1997). Subskele hiperaktivnosti i problema u ponašanju su konstruisale skalu eksternalizovanih problema adolescenata (10 ajtema), dok su subskele socijalnih odnosa sa vršnjacima i emocionalnih simptoma grupisane u okviru skale internalizovanih problema (10 ajtema). Kako su rezultati Kolmogorov-Smirnov testa pokazali značajno odstupanje od modela normalne raspodele, za obradu podataka su korišćeni neparametrijski statistički testovi: Man-Vitni i Kraskal-Volis test. Glavni rezultati istraživanja ukazuju na to da se adolescenti iz potpunih i nepotpunih porodica razlikuju na ukupnoj skali teškoća (U = 4395,00, p = 0,001), te da su razlike među grupama adolescenata iz potpunih (Mdn = 1,40, IQR = 0) i nepotpunih porodica (Mdn = 1,55, IQR = 1) vidljive i na skali internalizovanih problema (U = 3728,00, p < 0,02), kao i na skali eksternalizovanih problema (U = 4038,00, p < 0,02) u prilog višim skorovima adolescenata iz nepotpunih (Mdn = 1,80, IQR = 0) u odnosu na adolescente iz potpunih porodica (Mdn = 1,70, IQR = 0). U skladu sa rezultatima istraživanja, u zaključnom segmentu je diskutovano o potrebi dodatne podrške samohranim roditeljima i važnosti preventivnog delovanja selektivnog i indikovanog tipa na probleme ponašanja dece. Takođe, date su preporuke za buduća istraživanja iz ove oblasti.

*Ključne reči: porodična struktura, adolescenti, internalizovani i eksternalizovani problem*

---

\*\* dbogetic992@gmail.com

## THE RELATIONSHIP BETWEEN FAMILY STRUCTURE AND INTERNALISING AND EXTERNALIZING PROBLEMS IN ADOLESCENTS

Dragica Bogetić

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

As the family structure represents an important factor for the development of children and adolescents, the aim of the research was to examine the connection between the family structure (incomplete, reconstructed and complete families) and the internalizing and externalizing problems of adolescents, i.e. to determine differences in the manifestation of adolescent problems depending on the structure of the family. The sample consisted of students of the sixth and seventh grade of elementary school ( $N = 101$ ) and students of all grades of two secondary vocational schools ( $N = 160$ ) in Belgrade, a total of 261 respondents (51% female). Within the framework of a short socio-demographic questionnaire created for the purpose of research, the structure of the adolescent family was examined, while the difficulties of adolescents were tested using four subscales of Strengths and Difficulties Questionnaire (Goodman, 1997). Subscales of hyperactivity and behavioral problems construct a scale of externalized problems of adolescents (10 items), while subscales of social relationships with peers and of emotional symptoms are grouped within a scale of internalized problems (10 items). As the results of the Kolmogorov-Smirnov test showed a significant deviation from the normal distribution model, nonparametric statistical tests were used for processing the data: Mann-Whitney and Kruskal-Wallis test. The main research results indicate that adolescents from complete and incomplete families differ on the overall difficulty scale ( $U = 4395.00$ ,  $p = 0.001$ ), and the differences between adolescent groups from complete ( $Mdn = 1.40$ ,  $IQR = 0$ ) and incomplete families ( $Mdn = 1.80$ ,  $IQR = 0$ ) were noticeable both on the scale of internalized problems ( $U = 3728.00$ ,  $p < 0.02$ ), and on the scale of externalized problems ( $U = 4038.00$ ,  $p < 0.02$ ) in favor of higher scores of adolescents from incomplete families compared to adolescents from complete families ( $Mdn = 1.70$ ,  $IQR = 0$ ). In line with the results of the research, the final segment discussed the need for additional support for single parents and the importance of preventive action of selective and indication type on the problems of children's behavior. Also, recommendations for future research in this area are given.

*Key words: family structure, adolescents, internalizing and externalizing problems*

## CHARACTERISTICS OF GAMBLING ACTIVITIES AND MOTIVATION FOR GAMBLING OF HIGH SCHOOL STUDENTS FROM ZIVINICE

Meliha Bijedić\*\*, Lejla Kuralić Čišić, Adela Čokić

*University of Tuzla – Special Education and Rehabilitation, Tuzla, Bosnia and Herzegovina*

The aim of this paper is to gain an insight into gambling activities and to determine the structure of the motivation for gambling of high school students from Zivinice. The research was carried out in 2016 in three high schools: Medical school, Electro-technical high school and Zivinice grammar school. The sample included a total of 340 students from first to senior year. The age of respondents ranged from 15 to 19 years of age. This research is an integral part of the scientific-research and professionally applicable project “Gambling of Youth in Croatia”, which has been conducted at the Faculty of Education and Rehabilitation of the University of Zagreb since 2010 and which is being implemented in Bosnia and Herzegovina by the Education and Rehabilitation Faculty at the University of Tuzla. Special instrumentation was used with good metric characteristics, reliable and valid for gambling behavior and related phenomena. The results show that almost half of the students have experienced sports betting, and that this group is mostly made up of young boys with this type of gambling most commonly played, and more frequent participation in slot machines, roulette and betting on virtual races. Girls are less likely to indulge in sports betting, while lottery games are more common in this group. The overall severity of gambling-related issues has motives of: “making you feel better”, “to be better at gambling”, “to make money”, continuing to gamble after losing, winning and the frequency of gambling. The results further emphasize the importance of the experience, availability and accessibility of gambling activities on the market and are interpreted in the context of possible psychosocial and wider social interventions. It is important to focus activities and efforts to take specific preventive measures and create treatment programs for high school population.

*Key words: high school students, gambling habits, gambling motivation*

---

\*\* meliha.bijedic@untz.ba

## POGREŠNO PERCIPIRANA UPOTREBA ALKOHOLA I ILEGALNIH PSIHOAKTIVNIH SUPSTANCI KOD VRŠNJAKA KAO FAKTOR RIZIKA\*

Milica Matović\*\*

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Sklonost mladih da precenjuju upotrebu alkohola i ilegalnih psihoaktivnih supstanci kod svojih vršnjaka je nalaz koji se susreće u brojnim epidemiološkim studijama. Pogrešna uverenja imaju značajne implikacije na povećanje individualne upotrebe, jer mogu kod osobe stvoriti pritisak da se prilagode pogrešno percipiranoj vršnjačkoj normi. Ovakva uverenja rezultiraju iniciranjem upotrebe alkohola i ilegalnih psihoaktivnih supstanci kod nekorisnika, povećanjem upotrebe kod umerenih korisnika i racionalizacijom upotrebe kod korisnika koji prekomerno upotrebljavaju ove supstance. Pored toga, precenjena upotreba jedne supstance, može dovesti do prekomerne upotrebe neke druge supstance. Stoga je korigovanje pogrešnih percepcija o upotrebi alkohola i ilegalnih psihoaktivnih supstanci važan cilj preventivnog delovanja. Intervencije koje nastoje da redukuju disbalans između realne i percipirane vršnjačke norme za određeno ponašanje pokazuju višestruke benefite za većinu pojedinaca. One poživaju na pretpostavci da će diseminacija informacija o realnoj upotrebi alkohola i ilegalnih psihoaktivnih supstanci u populaciji mladih dovesti do smanjenja ili potpune obustave upotrebe i da će osporiti argumente koji služe kao opravdanje za prekomernu upotrebu. Cilj ovog preglednog rada je da se pružanjem uvida u rezultate dosadašnjih inostranih studija o pogrešno percipiranim vršnjačkim normama i njihovom uticaju na individualnu upotrebu alkohola i ilegalnih psihoaktivnih supstanci, postave smernice za buduća istraživanja i realizaciju preventivnih aktivnosti i u našoj zemlji.

*Ključne reči: pogrešna uverenja, alkohol, ilegalne psihoaktivne supstance, mladi*

\* Rad je nastao kao rezultat istraživanja na projektu „Socijalna participacija osoba sa intelektualnom ometenošću“ (br. 179017), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* mmatovic1992@gmail.com

\*\*\* Student doktorskih akademskih studija



## MISPERCEPTION OF ALCOHOL AND ILLICIT DRUG USE IN PEERS AS A RISK FACTOR\*

Milica Matović\*\*\*

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Youth tendency to overestimate the use of alcohol and illicit drug among their peers can be found in numerous epidemiological studies. False beliefs have important implications for increasing individual use, as they can make a pressure on a person to adopt such misperception of peer norms. Such beliefs can result in the initiation of the use of alcohol and illicit drug in non-users, increased use in moderate users and use of rationalization in heavy alcohol and drug users. In addition, misperceived use of one substance may lead to excessive use of another substance. Therefore, correcting misperception of peer alcohol and illicit drug use is an important goal of preventive action. Interventions that reduce the discrepancy between real and perceived peer norms for certain behaviors show multiple benefits for most individuals. They are based on the assumption that dissemination of information of the real use of alcohol and illicit drug among youth will lead to a reduction or complete suspension of use and will contradict arguments that serve as an excuse for excessive use. The aim of this review paper is to provide guidelines for future research and implementation of preventive activities in our country by providing an insight into the results of previous foreign studies on misperceived peer norms and their influence on the individual use of alcohol and illicit drug.

*Key words: false beliefs, alcohol, illicit drug, youth*

---

\* This paper is a result of the project “Social Participation of Persons with Intellectual Disability” (No. 179017), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

\*\*\* PhD student

# SAMOPOŠTOVANJE ADOLESCENATA SA TEŠKOĆAMA U EMOCIONALNOM I SOCIJALNOM RAZVOJU\*

Branislava Popović Ćitić\*\*,<sup>a</sup>, Lidija Bukvić<sup>a</sup>, Vesna Dukanac<sup>b</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Institut za mentalno zdravlje, Beograd, Srbija

Samopoštovanje je jedan od bazičnih individualnih resursa koji podstiče adekvatan emocionalni i socijalni razvoj pojedinca. Nizak nivo samopoštovanja može pogodovati ispoljavanju različitih teškoća, posebno tokom adolescentskog perioda, te nepovoljno uticati na razvoj unutrašnjeg sveta mlade osobe i njegove interakcije sa okruženjem. Sa ciljem ispitivanja samopoštovanja adolescenata sa teškoćama u emocionalnom i socijalnom razvoju sprovedeno je istraživanje u pet beogradskih srednjih škola tokom septembra 2018. godine. Uzorak je činilo 524 učenika oba pola (47,4% devojčica) prvog razreda. Prisustvo teškoća u emocionalnom i socijalnom razvoju procenjeno je Upitnikom snaga i teškoća (Goodman, 1997),  $\alpha = 0,75$ , dok je samopoštovanje učenika ispitano Rozenbergovom skalom samopoštovanja (Rosenberg, 1965),  $\alpha = 0,78$ . Istraživački nalazi pokazuju da ne postoje značajne razlike između dečaka i devojčica na skali samopoštovanja, kao ni na skali ukupnih teškoća. Međutim, dečaci ostvaruju više skorove na skali eksternalizovanih (socijalnih) teškoća ( $t(522) = 2,31, p = 0,021$ ), a devojčice na skali internalizovanih (emocionalnih) ( $t(523) = -3,38, p = 0,001$ ). Postoji značajna negativna korelacija između samopoštovanja i internalizovanih ( $r = -0,58, p = 0,000$ ), odnosno eksternalizovanih teškoća ( $r = -0,39, p = 0,000$ ). Učenici kod kojih ne postoje potrebe za dodatnim intervencijama u pogledu prisutnih socijalnih i emocionalnih teškoća imaju značajno više skorove na skali samopoštovanja ( $M = 42,38$ ) u odnosu na one kod kojih je ova potreba izražena u umerenom ( $M = 35,23$ ), odnosno visokom nivou ( $M = 30,35$ ) ( $F_{2,520} = 83,35, p = 0,000$ ). Dobijeni rezultati ostaju značajni i pri kontroli pola ( $F_{2,520} = 419,39, p = 0,000$ ), sa utvrđenom jakom vezom između konstrukata ( $\eta^2 = 0,62$ ). Na osnovu nalaza može se zaključiti da je samopoštovanje u značajnoj vezi sa stepenom izraženih socijalnih i emocionalnih teškoća, te da jaču vezu ostvaruje sa razvojem internalizovanih problema. Rezultati se mogu koristiti za planiranje intervencija sa učenicima srednjih škola usmerenih na jačanje samopoštovanja radi prevencije razvoja emocionalnih i socijalnih teškoća.

*Ključne reči: samopoštovanje, socijalne i emocionalne teškoće, socijalni i emocionalni razvoj, učenici srednje škole*

\* Rad je nastao kao rezultat istraživanja na projektu „Unapređivanje kvaliteta i dostupnosti obrazovanja u procesima modernizacije Srbije“ (br. 47008), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* popovb@eunet.rs

## SELF-ESTEEM OF ADOLESCENTS WITH DIFFICULTIES IN EMOTIONAL AND SOCIAL DEVELOPMENT\*

Branislava Popović Čitić<sup>a</sup>, Lidija Bukvić<sup>a</sup>, Vesna Dukanac<sup>b</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Institute of Mental Health, Belgrade, Serbia

Self-esteem is one of the basic individual resources that encourage an adequate emotional and social development of an individual. A low level of self-esteem can contribute to the manifestation of various difficulties, especially during the adolescent period, and adversely affect the development of the inner world of a young person and his/her interaction with the environment. In order to test the self-esteem of adolescents with difficulties in emotional and social development, a research was conducted in five Belgrade high schools in September 2018. The sample consisted of 524 pupils of both genders (47.4% of girls), of the first grade. The presence of difficulties in emotional and social development was assessed by *The Strengths and Difficulties Questionnaire* (Goodman, 1997),  $\alpha = 0.75$ , while self-esteem was examined by *Rosenberg self-esteem scale* (Rosenberg, 1965),  $\alpha = 0.78$ . Research findings show that there are no significant differences between boys and girls on the scale of self-esteem, or on the scale of total difficulties. However, boys achieve higher scores on the scale of external (social) ( $t(522) = 2.31, p = 0.021$ ), and the girls on the scale of internalized (emotional) ( $t(523) = -3.38, p = 0.001$ ) difficulties. There is a significant negative correlation between self-esteem and internalized ( $r = -0.58, p = 0.000$ ), as well as external difficulties ( $r = -0.39, p = 0.000$ ). Pupils who do not have the need for additional interventions in terms of social and emotional difficulties have significantly higher scores on the self-esteem scale ( $M = 42.38$ ) than those in whom this need is expressed in moderate ( $M = 35.23$ ) or high level ( $M = 30.35$ ) ( $F_{2,520} = 83.35, p = 0.000$ ). The obtained results remain important with the control of gender ( $F_{2,520} = 419.39, p = 0.000$ ), with a strong bond between the constructs ( $\eta^2 = 0.62$ ). Based on the results, it can be concluded that self-esteem is in a significant relationship with the degree of expressed social and emotional difficulties, and that a stronger relationship is achieved with the development of internalized problems. The results can be used to plan interventions with high school students focused on strengthening self-esteem for the prevention of the development of emotional and social difficulties.

*Key words: self-esteem, social and emotional difficulties, social and emotional development, high school students*

\* This paper is a result of the project "Improving the Quality and Accessibility of Education in Modernization Processes in Serbia" (No. 47008), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## NASTAVNICI KAO ŽRTVE NASILJA UČENIKA\*

Danica Vasiljević Prodanović\*\*

*Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija*

Kada govorimo o nasilju u školama, obično se misli na vršnjačko nasilje ili nasilje odraslih prema učenicima u školskom okruženju. Nastavnici kao žrtve nasilja učenika su mnogo ređe predmet interesovanja istraživača i šire javnosti. Prevalenca ovog fenomena nije zanemarljiva. Prema nekim podacima, od 75% do 80% nastavnika osnovnih i srednjih škola tokom svoje karijere pretrpi neki oblik nasilja od strane učenika. Nastavnici su najčešće izloženi verbalnom, emocionalnom/psihološkom, fizičkom i socijalnom nasilju. Akti nasilja uključuju direktno verbalno zlostavljanje, pretnje ili fizički napad, oduzimanje ili oštećivanje imovine, ogovaranje, ignorisanje, ometanje rada. Socijalno nasilje se često sprovodi anonimno, korišćenjem mobilnih telefona, interneta i društvenih mreža. Pored učenika, kao učinioci nasilja javljaju se i njihovi roditelji. Tamna brojka ovih pojava je velika jer se nastavnici nerado odlučuju da prijave lakše oblike nasilja. Nema dovoljno podataka o načinima na koje nadležni u školama reaguju na prijavljene slučajeve nasilja. Nasilje učenika nad nastavnicima je veoma ozbiljan problem. Istraživanja pokazuju da nasilje nad nastavnicima može imati dugotrajne negativne posledice po njihovo telesno, psihičko i emocionalno zdravlje, povezanost sa školom, posvećenost poslu i radni učinak. Predmet ovog rada je pojava nasilja nad nastavnicima od strane učenika osnovnih i srednjih škola. Cilj rada je da ukaže na problem nasilja i potrebu istraživanja fenomenologije i posledica nasilja učenika nad nastavnicima.

*Ključne reči: škola, učenik, nasilje, nastavnik, žrtva*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Razvoj metodologije evidentiranja kriminaliteta kao osnova efikasnih mera za njegovo suzbijanje i prevenciju“ (br. 179044), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* vp.danica@gmail.com

## TEACHERS AS VICTIMS OF STUDENT VIOLENCE\*

Danica Vasiljević Prodanović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Talking about school violence usually refers to peer violence or violence against students by adults in school environment. Teachers as victims of student violence are less often of concern to researchers and the general public. The prevalence of this phenomenon is not negligible. According to some data, 75% to 80% of teachers in primary and secondary schools have suffered some form of student violence during their careers. Teachers are usually subjected to verbal, emotional/psychological, physical, and social violence. Acts of violence include direct verbal abuse, physical threats or assaults, taken or destroyed property, gossiping, ignoring, obstructions of teacher's work. Social violence is often conducted anonymously, using mobile phones, the Internet and social networks. Students' parents also occur as perpetrators of violence along with students. The dark figure of this phenomenon is great because teachers are reluctant to report mild forms of violence. There is not enough information about the ways in which school officials respond to reported cases of violence. Student violence against teachers is a very serious problem. Research shows that violence against teachers may have long-term negative consequences on teachers' physical, mental and emotional health, connectedness to school, dedication, and job performance. The subject of this paper is the phenomenon of violence against teachers by students in primary and secondary schools. The aim is to highlight the problem of violence and the need to study the phenomenology and consequences of student violence against teachers.

*Key words: school, student, violence, teacher, victim*

---

\* This paper is a result of the project "Development of Crime Recording Methodology as the Basis for Efficient Crime Control and Prevention" (No. 179044), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

# SMETNJE I POREMEĆAJI SLUHA HEARING IMPAIRMENTS

---

## COMPARISON OF COGNITIVE ABILITY OF FIRST- AND SECOND-GENERATION DEAF CHILDREN WITH COCHLEAR IMPLANTS

Kourosh Amraei<sup>\*\*a</sup>, Leila Fathi<sup>b</sup>, Mohammadparsa Azizi<sup>b</sup>, AliHemat Mahmoudneghad<sup>c</sup>

<sup>a</sup>Lorestan University – Faculty of Humanistic Sciences, Khorramabad, Iran

<sup>b</sup>Lorestan University – Faculty of Medical Science, Khorramabad, Iran

<sup>c</sup>Islamic Azad University – Faculty Humanities and Social Sciences, Tehran, Iran

Hearing impairment is a common type of sensory loss in children. Studies indicate that children with hearing impairment are deficient in social, cognitive and communication skills. This study compared the cognitive ability of first- and second-generation deaf children with cochlear implants. This research is causal-comparative. All 15 deaf children who were investigated had deaf parents and were selected from Baqiyatallah Cochlear Implant Center. The 15 children with cochlear implants were paired with similar children with hearing parents using purposive sampling. The findings show that the Hotelling trace of multivariate analysis of variance ( $F = 6.78, p < 0.01, \eta_p^2 = 0.73$ ) was significant. The tests of between-subjects effects for second-generation children were significantly higher than for first-generation children for all intelligence scales except knowledge. It can be assumed that second-generation children joined their family in the use of sign language as the primary experience before a cochlear implant. The use of sign language before cochlear implants is recommended.

*Key words: First- and second-generation deaf children, cognitive ability, cochlear implant*

---

\*\* amraei.k@lu.ac.ir

## SLUŠNI UZRAST KAO FAKTOR RAZVOJA LINGVISTIČKIH VEŠTINA KOD DECE KORISNIKA KOHLEARNOG IMPLANTA I SLUŠNIH APARATA\*

Sanja Ostojić Zeljković\*\*, Mina Nikolić

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Korisnici amplifikacije ili kohlearnog implanta karakterišu se sa dve uzrasne kategorije: hronološki i slušni uzrast. Što je razlika između hronološkog i slušnog uzrasta manja, očekuje se da su i efekti surdološke intervencije značajniji. Savremeni modeli amplifikacije i primena kohlearnog implanta, u poslednjih dvadeset godina doveli su do značajnih promena u lingvističkim sposobnostima gluve i nagluve dece. Predmet ovog istraživanja je analiza stvarnih lingvističkih sposobnosti gluve i nagluve dece sa posebnim osvrtom na uticaj slušnog uzrasta na razvoj ovih sposobnosti. Cilj istraživanja je da se utvrdi uticaj slušnog uzrasta na razvoj stvarnih lingvističkih sposobnosti kod gluve i nagluve dece sa različitim modelima amplifikacije. Uzorak u ovom istraživanju obuhvata 43 ispitanika, uzrasta od 5 do 8 godina, sa različitim stepenom oštećenja sluha, amplifikovanih slušnim aparatima (19) i korisnika kohlearnog implanta (24). U okviru istraživanja je primenjen Profil stvarnih lingvističkih veština (PALS, 2004, Ear Foundation) koji procenjuje: svakodnevne veštine komunikacije, receptivne veštine, ekspresivne veštine, glasovne veštine i govorne veštine na različitim nivoima. Za obradu podataka korišćene su metode deskriptivne statistike (frekvencije, procenti) i bivarijantni hi-kvadrat ( $\chi^2$ ) test za procenu statističke značajnosti među varijablama. U odnosu na slušni uzrast uzorak je podeljen u 3 kategorije: do 2 godine, od 2 do 4 godine i od 4 do 6 godina. U ukupnom skoru primenjenog testa, slušni uzrast pokazao je statistički značajan uticaj ( $p = 0,014$ ) na ispitivane sposobnosti. I u primenjenim podtestovima svakodnevnih veština komunikacije: opseg namera u komunikaciji ( $p = 0,011$ ), efikasnost komunikacije ( $p = 0,013$ ); u podtestu receptivne veštine komunikacije ( $p = 0,012$ ); slušanje i čitanje sa usana ( $p = 0,014$ ) takođe se pokazao statistički značajan uticaj slušnog uzrasta. Najbolja postignuća ustanovljena su kod ispitanika slušnog uzrasta između 2 i 4 godine.

*Ključne reči: lingvističke veštine, slušni uzrast, kohlearni implant, slušni aparat*

\* Rad je nastao kao rezultat istraživanja na projektu „Uticaj kohlearne implantacije na edukaciju gluve i nagluve dece“ (br. 179055), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* snjostojic@gmail.com



## HEARING AGE AS A FACTOR OF LINGUISTIC SKILLS DEVELOPMENT IN CHILDREN USING COCHLEAR IMPLANT OR HEARING AIDS\*

Sanja Ostojić Zeljković, Mina Nikolić

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

Cochlear implant or hearing aid users are defined by two categories of age: chronological and hearing age. The effect of surdological intervention tend to be more prominent when the difference between those two age categories is lesser. Apart from that, the actual linguistic skills of deaf and hard of hearing children have improved tremendously over the past two decades due to wider implementation of cochlear implants and digital hearing instruments. The objective of this study was to analyze the actual linguistic skills of deaf and hard of hearing children with special focus on the impact of hearing age. The goal of the study was to determine the impact of different amplification modes (cochlear implant vs. hearing aids) on the development of actual linguistic skills in deaf and hard of hearing children. The sample consisted of 43 children, 5 to 8 years of age, with different degree of hearing loss, using hearing aids (19) or cochlear implant (24). The instrument in this study was the Profile of Actual Linguistic Skills (PALS, 2004, Ear Foundation) which was used to assess everyday communication skills, both receptive and expressive, voice quality and speech skills (pre-verbal, transitional and functional). The data was analyzed using descriptive statistics of category variables (frequency, percentage and bivariate  $\chi^2$  test for assessment of statistical significance of difference between variables). The children were divided in three categories according to their hearing age: less than 2 y, 2-4 y and 4-6 y. Hearing age showed a statistically significant effect on overall test results regarding linguistic skills ( $p = 0.014$ ) as well as in the subtests of everyday communication skills: span of communication intention ( $p = 0.011$ ), communication effectiveness ( $p = 0.013$ ), receptive communication skills ( $p = 0.012$ ) and listening and lip reading ( $p = 0.014$ ). The best performing group in this study of actual linguistic skills was the one with hearing age 2 to 4 years.

*Key words: linguistic skills, hearing age, cochlear implant, hearing aid*

---

\* This paper is a result of the project "Influence of Cochlear Implantation on Education of Deaf and Hard of Hearing Children" (No. 179055), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## UTICAJ HABILITACIJE NA POČETNI NIVO GOVORNOG RAZVOJA GLUVE I NAGLUVE DECE\*

Mina Nikolić\*\*, Sanja Ostojić Zeljković

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Poslednjih decenija značajne promene u pristupu deci sa urođenim oštećenjima sluha omogućile su razvoj njihovih govorno-jezičkih potencijala po prepoznatljivom modelu tipičnog razvoja. Postoje tri glavna razloga za to: 1) rana detekcija i intervencija, 2) savremene tehnologije u amplifikaciji, 3) promene u rehabilitaciji koje su usko povezane sa prethodno dva navedena razloga. Cilj istraživanja bio je da se utvrdi uticaj vremena dijagnostike, vrste amplifikacije, slušnog uzrasta i dužine trajanja rehabilitacije na dostignuti nivo početnog govornog razvoja gluve i nagluve dece. Uzorak istraživanja činilo je 43 gluve i nagluve dece predškolskog uzrasta. U uzorku bilo je 19 dece sa slušnim aparatima i 24 sa kohlearnim implantom, sa iskustvom u slušanju između nula i šest godina. Podaci o ispitanicima preuzeti su iz kliničkih dosijea ispitanika, dok je procenu govornih veština vršio terapeut - surdolog. Korišćen je Test za procenu stvarnih govornih veština (PASS, Ear Foundation, 2004) koji služi za procenu četiri nivoa početnog govornog razvoja: govor (prepoznatljiva fonema/slog), slično govoru (alofonske varijacije fonema), ne-govor (pred-smisleni oblici vokalizacije) i drugi simboli (nemi pokreti mimike). Obrada podataka vršena je metodama deskriptivne statistike (frekvencije, porocenti) i  $\chi^2$  testom. Rezultati istraživanja pokazali su da je većina dece 83,7% iz ispitivanog uzorka bila na nivou onomatopeja i logatoma, 11% ispitanika bilo je na nivou alofona, dok je 4,7% dece bilo na nivou ne-govora, ali su bila u stanju da izvedu neke simbole oralne praksije ili da se glasaju. Nije bilo dece na nivou nemih pokreta mimike. Ispitujući uticaj različitih faktora rehabilitacije, dobijeno je da jedino slušni uzrast pokazuje značajan statistički uticaj na postignuća ispitanika ( $\chi^2 = 11,67$ ,  $df = 4$ ,  $p = 0,02$ ) pri čemu su deca slušnog uzrasta 2-4 godine pokazala statistički značajno viši nivo govornog razvoja u odnosu na decu mlađeg, ali i u odnosu na decu starijeg slušnog uzrasta.

*Ključne reči: gluva i nagluva deca, govorno-jezičke veštine, kohlearni implant, slušni aparati*

\* Rad je nastao kao rezultat istraživanja na projektu „Uticaj kohlearne implantacije na edukaciju gluve i nagluve dece“ (br. 179055), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* mina.mikic@gmail.com

## THE IMPACT OF HABILITATION ON EARLY SPEECH DEVELOPMENT ACHIEVEMENT IN DEAF AND HARD OF HEARING CHILDREN\*

Mina Nikolić, Sanja Ostojić Zeljković

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

Considerable changes in treatment of children with congenital hearing loss during recent decades have enabled speech and language development like the timeline of typically developing children. There are three major reasons for that: 1. Early detection and intervention, 2. State of art amplification and 3. Changes in habilitation strategies according to afore mentioned reasons. The objective of the study was to discover the influence of the age at detection of hearing loss, type of amplification, hearing age and habilitation duration on speech development in deaf and hard of hearing children. The sample consisted of 43 deaf or hard of hearing children of pre-school age. Nineteen children had hearing aids and 24 had cochlear implant and their hearing age ranged from 0 to 6 years. The data about children were summoned from medical records and assessment of speech skills was done by a therapist - surdologist. Profile of Actual Speech Skills (PASS, Ear Foundation, 2004) was used for assessment of four levels of initial speech development: speech (recognizable phoneme/syllable), speech like (allophonic phoneme variation), non-speech (pre-meaning vocalization) and other symbols (silent mimic movements). The data were analyzed using descriptive statistics (frequency, percentage) and  $\chi^2$  test. The results showed that majority of the children from the sample (83.7%) were on the level of onomatopoeias and logatomes, 11% were on allophone level, while 4.7% of children were nonverbal, still capable to produce some symbols of oral praxia or voice. None of the children in this study were on the silent mimic movement level. Analyzing the impact of different factors of habilitation, we found that only hearing age affected speech achievement at a statistically significant level ( $\chi^2 = 11.67$ ,  $df = 4$ ,  $p = 0.02$ ). The children with hearing age 2-4 years showed statistically significantly better achievement in comparison not only to the younger group, but to the older group as well.

*Key words: deaf and hard of hearing children, speech-language skills, cochlear implant, hearing aid*

---

\* This paper is a result of the project "Influence of Cochlear Implantation on Education of Deaf and Hard of Hearing Children" (No. 179055), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## BIMODALNI BILINGVIZAM GLUVE I NAGLUVE DECE PREDŠKOLSKOG UZRASTA\*

Tamara Kovačević\*\*, Sanja Đoković

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Bimodalni bilingvizam gluve i nagluve dece podrazumeva poznavanje i redovnu upotrebu znakovnog jezika, koji koristi zajednica gluvih i govornog jezika koji koristi čujuća većina. Bilingvizam čujućih se razlikuje od bilingvizma gluvih. Bilingvalna čujuća deca, uče dva jezika kao i gluvi. Razlika je u tome što drugi jezik uče auditivnim putem, u istom modalitetu kao i prvi jezik. Gluva deca uče dva jezika, u dva modaliteta, što je znatno složenije. Znakovni i govorni jezici uključuju različite perceptivne i produktivne sisteme. Dok, govorni jezici uključuju mehanizme auditivne obrade i govorne produkcije, znakovni jezici se percipiraju vizuelno i njihova artikulacija uključuje sistematsko korišćenje delova tela i prostora. Primerena i efikasna rana komunikacija bez obzira u okviru kog jezičkog modaliteta se odvija (znakovni ili govorni), zajedno sa prihvatanjem deteta i njegovog oštećenja je osnova uspešnog kognitivnog razvoja i razvoja ličnosti deteta, što predstavlja osnovu komunikacije i izgradnje jezičkih veština. Na predškolskom uzrastu, zadatak vrtića je omogućiti deci da nastave da usvajaju jezik koji su počela da usvajaju u porodici (znakovni ili govorni). Deca će najbolje usvojiti oba jezička modaliteta kroz interakcije sa drugim fluentnim govornicima (odraslima i decom). Gluva deca gluvih roditelja su u svakodnevnom situacijama okružena svojim prvim (primarnim) jezikom u porodici, za razliku od gluve dece, čujućih roditelja. Kod gluve dece, čujućih roditelja, vaspitno-obrazovna ustanova je odgovorna za afirmaciju znakovnog jezika, kulture i identiteta gluvih i važna je za povezivanje porodice sa zajednicom gluvih.

*Ključne reči: bimodalni bilingvizam, gluva i nagluva deca, predškolski uzrast*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Uticaj kohlearne implantacije na edukaciju gluve i nagluve dece“ (br. 179055), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* 122tamara@gmail.com

## BIMODAL BILINGUALISM IN DEAF AND HARD OF HEARING CHILDREN OF PRESCHOOL AGE\*

Tamara Kovačević, Sanja Đoković

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Bimodal bilingualism of deaf and hard of hearing children implies the knowledge and regular use of sign language, which is used by the community of the deaf, and the spoken language, which is used by the majority who can hear. Bilingualism of the hearing is different from the bilingualism of the deaf. Bilingual hearing children, as well as deaf children, learn two languages. The difference is that hearing children learn a second language through auditory means, in the same modality as a first language. Deaf children learn two languages in two modalities, which is considerably more complex. Sign and spoken languages include various perceptual and productive systems. While spoken languages include mechanisms of auditory processing and speech production, sign languages are perceived visually, and their articulation involves the systematic use of parts of the body and space. Appropriate and effective early communication, regardless of within which linguistic modality (sign or spoken) it takes place, together with the acceptance of the child and its impairment is the basis of successful cognitive development and the development of the child's personality, which is the basis of communication and of building language skills. At preschool age, the task of a kindergarten is to enable children to continue to learn the language which they started learning in the family (sign or spoken language). Children will learn both linguistic modalities best through the interaction with other fluent speakers (adults and children). The deaf children of deaf parents are, in everyday situations, surrounded with their first (primary) language in the family, unlike the deaf children of hearing parents. In the deaf children of hearing parents, the educational institution is responsible for the affirmation of sign language, the culture and identity of the deaf, and it is important for connecting the family with the deaf community.

*Key words: bimodal bilingualism, deaf and hard of hearing children, preschool age*

---

\* This paper is a result of the project "Influence of Cochlear Implantation on Education of Deaf and Hard of Hearing Children" (No. 179055), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## UPOTREBA PRAVIH PRIDEVA KOD GLUVE I NAGLUVE DECE\*

Ivana Veselinović\*\*,<sup>a</sup> Svetlana Slavnić<sup>a</sup>, Ljiljana Jeličić<sup>b,c</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Centar za unapređenje životnih aktivnosti, Beograd, Srbija

<sup>c</sup>Institut za eksperimentalnu fonetiku i patologiju govora, Beograd, Srbija

U verbalnom izražavanju gluve i nagluve dece pravi pridevi se nedovoljno upotrebljavaju, a i koriste se u drugačijoj funkciji u rečenici, u odnosu na rečenične konstrukcije dece tipičnog jezičkog razvoja. Cilj rada bio je da se utvrdi, uporedi i razjasni upotreba i funkcije pravih prideva u formiranju iskaza kod gluve i nagluve dece i dece tipičnog razvoja. Istraživanjem je obuhvaćeno 130 učenika starijih razreda osnovne škole, oba pola, prosečnih intelektualnih sposobnosti, bez dodatnih oštećenja. Eksperimentalnu grupu je činilo 50 učenika čije je oštećenje sluha preko 70 dB. Ovi učenici pohađali su škole za gluvu i nagluvu decu u Srbiji (40 učenika) i škole za decu tipičnog razvoja (10 učenika). Kontrolna grupa obuhvatila je 80 učenika tipičnog razvoja. Za potrebe istraživanja koristili smo i unapred definisane teme za pisanje četiri sastava različitih žanrova: narativ, deskripcija, ekspozicija i argumentativ, kao i poseban protokol za prikupljanje podataka koji je konstruisan za potrebe ovog istraživanja. Prikupljeni podaci obrađivani su pomoću statističkog paketa SAS 9.3. Pored kvantitativne analize, prikupljeni materijal analizirali smo i kvalitativno. Rezultate istraživanja prikazali smo tabelarno, a najznačajnije rezultate smo i posebno diskutovali. Rezultati istraživanja govore da su deca koja pohađaju škole za gluve i nagluve prilikom formiranja iskaza upotrebila značajno manje pravih prideva od dece tipičnog jezičkog razvoja. Upotreba i funkcije pravih prideva kod dece tipičnog razvoja zavise od pola i razreda koji dete pohađa, a kod gluve i nagluve dece od razreda koji dete pohađa, dominantnog načina komunikacije i dužine primenjenog re/habilitacionog tretmana. Na osnovu rezultata istraživanja zaključili smo da se upotreba pravih prideva u formiranju iskaza povećava sa sazrevanjem i bogaćenjem govorno-jezičkog i vaspitno-obrazovnog iskustva kod gluve i nagluve dece, kao i povećanjem dužine trajanja njihove re/habilitacije na predškolskom uzrastu.

*Ključne reči: gluva i nagluva deca, deca tipičnog jezičkog razvoja, pravi pridevi*

\* Rad je nastao kao rezultat istraživanja na projektu „Uticaj kohlearne implantacije na edukaciju gluve i nagluve dece“ (br. 179055), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* ivibarlov@yahoo.com

## THE USE OF DESCRIPTIVE ADJECTIVES IN PARTIALLY AND COMPLETELY DEAF CHILDREN\*

Ivana Veselinović<sup>a</sup>, Svetlana Slavnić<sup>a</sup>, Ljiljana Jeličić<sup>b,c</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>Life Activities Advancement Center, Belgrade, Serbia

<sup>c</sup>Institute for Experimental Phonetics and Speech Pathology, Belgrade, Serbia

During verbal expression, partially and completely deaf children do not use descriptive adjectives sufficiently compared to sentence constructions in children with typical language development. The research aim was to estimate, compare and explain the use and function of descriptive adjectives during statement formation in partially and completely deaf children and typically developing children. The study included 130 children of both sexes, with average intellectual abilities and without additional impairments. All children attended higher classes of elementary school. The sample was divided into three groups: the first experimental group (E) consisted of 40 children whose hearing loss was more than 70 dB and who attended schools for hearing impaired children; the second experimental group (E1) consisted of 10 children whose hearing loss was more than 70 dB and who attended schools for typically developing children. The control group (K) consisted of 80 typically developing children. A special protocol for data collection was constructed. In addition to this protocol, predefined topics for writing four compositions of different genres were used: narrative, descriptive, exposition and argumentative. The research results suggest that partially and completely deaf children who attend schools for hearing impaired children used significantly fewer descriptive adjectives in sentence constructions compared to typically developing children. The use and functions of descriptive adjectives in typical children depend on the sex and the class while in the group of partially and completely deaf children they depend on sex, dominant mode of communication and the length of applied re/habilitation treatment. Based on the obtained results, it may be concluded that, in the group of partially and completely deaf children, the use of descriptive adjectives during statement formation increases with maturation and richness of speech and language and educational experience.

*Key words: partially and completely deaf children, typically developing children, descriptive adjectives*

---

\* This paper is a result of the project "Influence of Cochlear Implantation on Education of Deaf and Hard of Hearing Children" (No. 179055), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## UPOTREBA REČI SUPROTNOG ZNAČENJA U PISANOM I ZNAKOVNOM JEZIKU\*

Ljubica Isaković\*\*, Mia Šešum, Nadežda Dimić

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Odsustvo slušanja kod gluve i nagluve dece komplikuje i otežava razvoj govora i jezika. Oni se usvajaju na specifičan način i razvijenost će, u velikoj meri, zavisiti od podsticaja iz okoline. Poseban problem je izgradnja rečnika, usvajanje novih reči, kao i njihovo adekvatno povezivanje sa značenjem. Znakovni jezik za njih nije hendikep već prirodni oblik izražavanja, uporediv sa izražajnim potencijalom govornog jezika. On im omogućava kognitivna, komunikativna i kreativna iskustva. Cilj ovog rada bio je da se utvrdi stepen usvojenosti reči suprotnog značenja datih imenica, glagola, prideva i priloga u pisanom i znakovnom jeziku gluvih i nagluvih učenika. Korišćen je segment Jezičkog korpusa za procenu leksičko-stilskih specifičnosti (Dimić i Isaković, 2003). Od dece se tražilo da daju suprotna značenja na zadate reči, koristeći pisani i znakovni jezik. Ispitivanjem je oduhvaćeno 54 učenika sa oštećenjem sluha uzrasta od petog do osmog razreda i obavljeno je u Beogradu. Računali smo frekvencije i procenite, aritmetičku sredinu i standardnu devijaciju, t-test i njegov značaj, Vilkoksonov test označenih rangova. Uočava se uticaj uzrasta na adekvatnu upotrebu reči suprotnog značenja. Najveći broj pravilno korišćenih reči suprotnog značenja i bolji rezultati dati su u znakovnom jeziku (imenice  $t = -3,822$ ,  $p = 0,01$ ; glagoli  $t = -9,113$ ,  $p = 0,01$ ; pridevi  $t = -4,732$ ; prilozima  $t = -6,892$ ,  $p = 0,01$ ). Znakovni jezik treba da bude osnova za razvoj pisanog jezika gluve dece. Njegov razvoj prati razvoj pisanog govora, utiče na bolje razumevanje značenja postojećih reči, kao i na usvajanje značenja nepoznatih reči. Uočene su i date specifične greške.

*Ključne reči: reči suprotnog značenja, pisani govor, znakovni jezik, gluvi i nagluvi učenici*

\* Rad je nastao kao rezultat istraživanja na projektu „Uticaj kohlearne implantacije na edukaciju gluve i nagluve dece“ (br. 179055), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* ljubicaisakovic07@gmail.com



## THE USE OF WORDS OF THE OPPOSITE MEANING IN WRITTEN AND SIGN LANGUAGE\*

Ljubica Isaković, Mia Šešum, Nadežda Dimić

University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

The absence of the auditory component in deaf children complicates or completely incapacitates the development of speech and language. Language is adopted in a specific manner and its development depends greatly on the stimulus from the environment. Problem in vocabulary building is the assimilation of new words and their adequate association with their meaning. For deaf children, sign language is not a handicap, but a natural form of expression, comparable to the expressive potential of spoken language which provides them with cognitive, communicative and creative experiences. The purpose of this paper was to examine the level of adoption of the opposite meaning of the given nouns, verbs, adjectives and adverbs in written and sign language of deaf and hard of hearing students. The study incorporated a segment of the Language corpus for the evaluation of lexical-style related characteristics (Dimic & Isakovic, 2003). In the tasks that were given to the children, they were asked to give opposite meanings of the given words using written and sign language. The study consisted of 54 deaf students attending fifth to eighth grade at two schools in Belgrade. We calculated frequencies and percentage mean score and standard deviations, t-test and its significance, Wilcoxon Signed Ranks Test. We determined the influence of age on adequate use of words of the opposite meanings. The greatest number of correctly used words of the opposite meaning was used in the sign form of expression (nouns  $t = -3.822$ ,  $p = 0.01$ ; verbs  $t = -9.113$ ,  $p = 0.01$ ; adjectives  $t = -4.732$ ; adverbs  $t = -6.892$ ,  $p = 0.01$ ). Sign language should be the basis for the development of the written language of deaf children. Its development follows the development of written speech, influences a better understanding of the meaning of existing words, and the acceptance of the meaning of unknown words. Different specific mistakes were observed.

*Key words: words of the opposite meaning, written language, sign language, deaf and hard of hearing students*

---

\* This paper is a result of the project "Influence of Cochlear Implantation on Education of Deaf and Hard of Hearing Children" (No. 179055), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## PERCEPCIJA KVALITETA ODELJENJSKE KLIME U ODNOSU NA ŠKOLSKI USPEH GLUVIH I NAGLUVIH UČENIKA\*

Vesna Radovanović\*\*, Jasmina Kovačević, Jasmina Karić

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Veliki broj gluve i nagluve dece se obrazuje u školama za gluve i nagluve učenike. Razlozi su brojni, a među najznačajnijim su korišćenje znakovnog jezika, tim profesionalaca obučen za rad sa gluvim i naglulvim učenicima i prilagođenost školskog okruženja. Postoji još jedan značajan razlog, a to je, da pored oštećenja sluha, učenici imaju dodatne smetnje ili oštećenja, i ovakav tip škole može izaći u susret njihovim dodatnim potrebama. Način komunikacije u školama za gluve i nagluve, raspored sedenja, prilagođenost gradiva sposobnostima učenika, samo su neki od aspekata odeljenske klime koja pomaže gluvim i naglulvim učenicima da ostvare socijalni i akademski uspeh. Za cilj istraživanja postavljeno je utvrđivanje odnosa doživljaja odeljenske klime i školskog uspeha kod gluvih i naglulvih učenika srednje škole. Prigodan uzorak za istraživanje je činilo 30 gluvih i naglulvih učenika, uzrasta od petnaest do sedamnaest godina iz tri srednje škole u Srbiji. Strukturu uzorka prema školskom uspehu činilo je 13 (43,3%) učenika sa dobrim, 11 (36,7%) sa vrlodobrim i 6 (20%) učenika sa odličnim uspehom. U istraživanju je korišćena Skala razredne klime (Vessels, 1998), sastavljena od 18 tvrdnji usmerenih na procenu relacija u odnosima učenik – učenik, učenik – nastavnik i osteljivost na nasilje u okruženju iz perspektive učenika. Rezultati istraživanja su pokazali da je percepcija odeljenske klime u značajnoj meri povezana sa školskim uspehom učenika. Učenici sa višim školskim uspehom bili su manje osetljivi na nasilje u okruženju ( $F = 5,337$ ;  $df = 2$ ;  $p = 0,011$ ), za razliku od percepcije odnosa između učenika i nastavnika, gde su pokazali veću osetljivost ( $F = 4,707$ ;  $df = 2$ ;  $p = 0,018$ ). Dobijeni rezultati upućuju na zaključak da učenici sa najvišim školskim uspehom imaju pozitivniju sliku odeljenske klime, a što je još važnije, ukazuju na kompleksnost odnosa koji vladaju u učionici.

*Ključne reči: gluvi i nagluvi učenici, školski uspeh, odeljenska klima, škole za gluve i nagluve učenike*

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* radovanovic3@yahoo.com

## RELATIONS BETWEEN PERCEIVING THE QUALITY OF CLASSROOM CLIMATE AND ACADEMIC ACHIEVEMENT OF DEAF AND HARD OF HEARING STUDENTS\*

Vesna Radovanović, Jasmina Kovačević, Jasmina Karić

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Many deaf and hard of hearing children attend specialized schools for deaf and hard of hearing. There are many different reasons, and the most important are the use of sign language, the fact that there are teams of professionals who are trained for working with deaf and hard of hearing students, as well as adapted school setting. Another very important reason is that this type of schools can meet any other special needs that deaf and hard of hearing students may have due to additional impairments and/or disabilities. The means and types of communication, sitting arrangement, curriculums adapted to students' abilities are just some of the aspects of classroom climate that help deaf and hard of hearing students to achieve social and academic success. Therefore, the aim of this study is determining if there is a relation between perceived classroom climate and academic achievement. The sample consisted of 30 deaf and hard of hearing students, age 15 to 17, from three high schools in Serbia. In terms of school achievement, the sample consisted of 13 (43.3%) students with average (C) grades, 11 (36.7%) students with above average (B) grades and 6 (20%) students with excellent (A) grades. Student-student relationships and student-teacher relationships, as well as awareness and reporting of violence in school environment were assessed using Vessels School Climate Questionnaire (Vessels, 1998), that consists of 18 statements. The results of the study showed that perception of classroom climate significantly correlates with academic achievement. Students with higher grades were less aware of violence in their environment ( $F = 5.337$ ;  $df = 2$ ;  $p = 0.011$ ), but they showed higher awareness in perceiving student-teacher relationship ( $F = 4.707$ ;  $df = 2$ ;  $p = 0.018$ ). The results indicate that students with the highest grades had more positive perception of classroom climate. More importantly, these results emphasize the complexity of the relationships that exist in the classroom.

*Key words: deaf and hard of hearing students, academic achievement, classroom climate, specialized schools for deaf and hard of hearing students*

---

\* This paper is a result of the project "Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs" (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## ZASTUPLJENOST INOVATIVNIH MODELA NASTAVE U OBRAZOVANJU GLUVIH I NAGLUVIH UČENIKA\*

Jasmina Kovačević\*\*, Vesna Radovanović, Dragana Maćešić Petrović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Cilj rada bio je da se ispita zastupljenost inovativnih modela nastave u obrazovanju gluvih i nagluvih učenika, kao i stav nastavnika o uticaju inovativnih modela nastave na unapređenje kvaliteta obrazovnog rada. Uzorak istraživanja činilo je 140 ispitanika koji rade u školama za gluvu i nagluvu decu sa teritorije Republike Srbije. Strukturu uzorka u odnosu na pol činilo je 79,3% ispitanika ženskog i 20,7% ispitanika muškog pola, u odnosu na vrstu i stepen obrazovanja 77,9% diplomiranih defektologa i 22,1% ispitanika sa visokim obrazovanjem nedefektologa, a u odnosu na dužinu radnog staža najzastupljeniji su bili ispitanici sa dužinom od 11 do 20 godina radnog staža (35,7%). Za potrebe istraživanja korišćen je posebno dizajniran upitnik koji je pored pitanja vezanih za opšte podatke o ispitanicima, sadržao 26 pitanja koja su se odnosila na zastupljenost inovativnih modela u obrazovnom radu, kao i stav nastavnika prema uvođenju inovacija. Dobijeni rezultati su pokazali da je u nastavnom radu najzastupljenija primena individualizovane nastave (82,1%), zatim integrativna nastava (55%), nastava uz pomoć kompjutera (43,6%), tandemska i interaktivna nastava (35,7%), dok je najmanje zastupljena programirana nastava (12,8). Rezultati istraživanja pokazuju da 69,3% ispitanika ima pozitivne stavove o uticaju inovativnih modela na unapređenje nastave. Uvođenje inovacija prema mišljenju 52,9% ispitanika zahteva dopunsko obrazovanje, 69,3% ispitanika se izjasnilo da poznaje didaktičke karakteristike inovativnih modela, dok je 19,3% ispitanika navelo da postoji otpor prema inovacijama, jer nastavnici nedovoljno poznaju njihovu suštinu. Na osnovu rezultata može se zaključiti da postoji zainteresovanost nastavnika i pozitivan stav prema primeni inovacija u nastavi što predstavlja jedan od značajnih faktora pomeranja granica sa tradicionalnog koncepta ka nastavi usmerenoj prema potrebama savremenog društva.

*Ključne reči: gluvi i nagluvi učenici, inovativni modeli, nastava, stavovi nastavnika, škole za gluve i nagluve učenike*

\* Rad je nastao kao rezultat istraživanja na projektu „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* kovacjasm@gmail.com

## THE FREQUENCY OF INNOVATIVE MODELS IN EDUCATION OF DEAF AND HARD OF HEARING PUPILS\*

Jasmina Kovačević, Vesna Radovanović, Dragana Maćešić Petrović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

The aim of this research was to determine the innovative models of education in the population of deaf and hard of hearing pupils, as well as attitudes of teachers toward this research problem. The sample was formed of 140 educators working at schools for deaf and hard of hearing in the Republic of Serbia. Gender distribution of the sample was 79.3% of female and 20.7% of male respondents. Distribution of the type of education of respondents was: 77.9% respondents with a degree in special education studies and 22.1% respondents with another type of a university degree. With regard to years of service, most respondents were distributed in the category of 11-20 years of professional experience in the field of special education. We implemented the specially designed questionnaire with regard to two categories of questions: 1) frequency of innovative models in educational work, and 2) the attitudes of educators toward the implementation of the innovative models of working in schools. Most frequent models were individualization in education (82.1%), the integrative education (55%), computer education (43.6%), tandem and interactive education (35.7%). The least frequently used model was programmed teaching (12.8%). Attitudes of special educators toward the innovative models of teaching deaf and hard of hearing pupils, point out that 69.3% educators had positive attitudes toward innovative models of teaching, while 19.3% educators were negatively oriented toward innovative models in education. The results point out the conclusion about the necessity of implementation of new models in education of these children, which is the attitude of most respondents in the research sample.

*Key words: deaf and hard of hearing, innovative models, education, teacher attitudes, special schools for deaf and hard of hearing*

---

\* This paper is a result of the project "Creating a Protocol for Assessing Educational Potentials of Children with Disabilities, as a Criterion for the Development of Individual Educational Programs" (No. 179025), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## SAMOPOŠTOVANJE I ULOGA SPORTA KOD GLUVIH I NAGLUVIH

Ljiljana Jovčić<sup>\*\*a</sup>, Tijana Palibrk<sup>b</sup>, Iva Milićević<sup>a</sup>

<sup>a</sup>Visoka zdravstvena škola strukovnih studija u Beogradu, Beograd, Srbija

<sup>b</sup>Ustanova za dnevni boravak dece, mladih i odraslih sa smetnjama u razvoju „Zračak“, Čačak, Srbija

Kroz bavljenje sportom, osobe sa nekom vrstom ometenosti mogu steći samopouzdanje i osećaj vrednosti, mogu smanjiti stepen depresije, stresa i anksioznosti. Neki autori su zaključili da osobe koje redovno vežbaju poboljšavaju svoje opšte zdravstveno stanje i kondiciju, osećaju zadovoljstvo i dobijaju unutrašnju snagu, što se pozitivno odražava na sve druge sfere njihovog života. Isto kao čujuć i gluvi sportisti su zainteresovani da poboljšaju svoje performanse i povećaju svoje sposobnosti. Sport ima važnu ulogu u povezivanju gluvih i naglavih osoba ali i gluvih osoba sa čujućima, što doprinosi povećanju samopoštovanja. Cilj istraživanja je utvrditi da li bavljenje sportom utiče na samopoštovanje kod gluvih i naglavih osoba i da li postoji razlika u nivou izraženog samopoštovanja između gluvih i naglavih osoba koje se bave sportom i gluvih i naglavih osoba koje nisu uključene u sportske aktivnosti. Uzorkom je obuhvaćena 71 gluva i naglava osoba, uzrasta od 20-72 godine, prosečnih intelektualnih sposobnosti, od kojih se 45 (63,4%) bavi sportom i 26 (36,6%) onih koji nisu uključeni u sportske aktivnosti. Podaci su se prikupljali pomoću Rozenbergove skale samopoštovanja. Za kvantitativnu obradu podataka korišćen je SPSS. Postoji statistički značajna razlika između gluvih i naglavih osoba koje se bave sportom i gluvih i naglavih osoba koje nisu uključene u sportske aktivnosti u pogledu nivoa izraženog samopoštovanja i motiva postignuća. Gluve i naglave osobe koje se bave sportom imaju značajno veće samopoštovanje i veću motivaciju za postignućem, istrajnije su u ostvarivanju svojih ciljeva, u većoj meri vide ostvarenje cilja kao izvor zadovoljstva, više se orijentišu na planiranje i imaju veću želju za takmičenjem od gluvih i naglavih osoba koje nisu uključene u sportske aktivnosti. Gluvi sportista je fizički sposoban i može da se takmiči bez ikakvih ograničenja. Za bavljenje sportom nije neophodan sluh, pa se ove osobe osećaju kao ravnopravni takmičari uz čujuće, a to im daje motivaciju za učestvovanje u sportskim aktivnostima.

*Ključne reči: gluvi i naglavi, sport, samopoštovanje*

\*\* ljiljana.jovcic@yahoo.com

## SELF-ESTEEM AND ROLE OF SPORT AND FITNESSES IN DEAF INDIVIDUALS

Ljiljana Jovčić<sup>a</sup>, Tijana Palibrk<sup>b</sup>, Iva Milićević<sup>a</sup>

<sup>a</sup>Medical College of Applied Studies in Belgrade, Belgrade, Serbia

<sup>b</sup>Institution for Day Care of Children, Youngsters and Adults with Disabilities "Zračak", Čačak, Serbia

By doing sports, individuals with some kind of disability have the possibility to gain self-confidence, a sense of values, as well as the possibility to reduce depression, stress and anxiety. Some authors conclude that individuals who regularly do sports can improve their general health and fitness, feel satisfied and gain inner strength, which positively reflects all other spheres of their lives. Equally as athletes without any disabilities, deaf athletes are also interested in improving their performance, as well as increasing their abilities. Sport has a very important role in connecting not only deaf individuals, but in connecting them with individuals without this disability, which therefore contributes to their self-esteem improvement. The aim of the research was to determine whether involvement in sports affects self-esteem of deaf and partially deaf individuals, as well as to determine whether there was a difference considering the level of self-esteem between them and the ones with the same disabilities who were not involved in any kind of sport activities. The sample included 71 deaf individuals, aged from 20 to 72, with average intellectual abilities, whereas 45 of them (63.4%) were engaged in different sports, and 26 (36.6%) were not involved in any kind of sport activities. The data were collected using the Rosenberg self-esteem scale. In addition, SPSS was used for the quantitative data processing. The results showed that there was a statistically significant difference between deaf individuals involved in sports and the ones with the same disabilities who were not involved in any kind of sport activities regarding the level of expressed self-esteem and motive of achievement. Deaf and hard of hearing people who played sports had significantly greater self-esteem and greater motivation for achievement, were more persistent in achieving their goals, they saw the achievement of the goal as a source of satisfaction, they were more oriented towards planning and had a greater desire for competition from deaf and hard of hearing persons who were not involved in sports activities. A deaf sportsman is physically fit and can compete without any limitations. Since hearing is not needed for sports, these people feel like equal competitors with the hearing ones, and this motivates them to take part in sports activities.

*Key words: deaf individuals, sport, self-esteem*

## OŠTEĆENJE SLUHA IZAZVANO STARENJEM – PREZBIAKUZIJA\*

Sanja Đoković\*\*, Tamara Kovačević

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Prezbiakuzija je progresivan gubitak sluha koji nastaje starenjem, a koji se karakteriše smanjenom osetljivošću za zvučne podražaje i razumevanje govora u bučnim okruženjima, usporenom centralnom obradom akustičkih informacija i poremećajem lokalizacije izvora zvuka. Prezbiakuzija je veoma čest tip oštećenja sluha, koji ima značajan uticaj na kvalitet života starih osoba. Kako se povećava broj starih osoba, očekuje se da će se u budućnosti povećati i incidencija prezbiakuzije. Napori da se poboljša komunikacija u starosti su važni i može se očekivati da će oni dovesti do poboljšanja kvaliteta života starijih osoba. Cilj ovog istraživanja je bio da se utvrde neke karakteristike povezane sa pojavom, uslovima, oblikom ispoljavanja i teškoćama koje su izazvane prezbiakuzijom. U istraživanju je učestvovalo 50 ispitanika starosti od 42 do 89 godina, oba pola, 28 muškaraca i 22 žene. Za ispitivanje je korišćen upitnik konstruisan za ovo istraživanje koji je obuhvatao 4 grupe pitanja: opšti podaci, medicinsku istoriju, stanje sluha i korišćenje slušnih aparata. Rezultati pokazuju da se prosečan prag sluha kod ispitanika kretao od 26,8 dB do 103,7 dB sa descedentnom konfiguracijom simetrično prisutnom na oba uva. Prema stepenu oštećenja sluha najviše je bilo umerenih (42%) a najmanje praktičnih gluvoća (4%). Oštećenje sluha se najčešće postepeno pojavljivalo u (84%), a tinitus je bio prisutan kod 70% ispitanika. Najveće teškoće izazvane oštećenjem sluha su prisutne prilikom gledanja TV i to u 40%. Slušni aparat koristi samo jedna osoba (2%). Na osnovu rezultata se može zaključiti da je oštećenje sluha izazvano starenjem prisutno kod oba pola sa tendencijom pogoršanja sa povećanjem godina starosti. Takođe, prisutan je kormobiditet sa drugim smetnjama i poremećajima što značajno usložnjava lečenje i rehabilitaciju starih osoba. Mali procenat ispitanika koji koriste slušni aparat ukazuje na nisku svest starih osoba o mogućnostima i prednostima ovog uređaja.

*Ključne reči: prezbiakuzija, starenje, oštećenje sluha*

---

\* Rad je nastao kao rezultat istraživanja na projektu „Uticaj kohlearne implantacije na edukaciju gluve i nagluve dece“ (br. 179055), koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* sanjadjokovic64@gmail.com



## HEARING LOSS CAUSED BY AGING – PRESBYACUSIS\*

Sanja Đoković, Tamara Kovačević

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia*

Presbycusis is a progressive age-related hearing loss characterized by reduced hearing sensitivity and speech understanding in noisy environments, slowed central processing of acoustic information, and impaired localization of sound sources. Presbycusis is a very common type of hearing loss, often having profound effects on the quality of life of the elderly. Since the number of elderly persons is increasing, the incidence of presbycusis is also expected to increase in the future. Efforts to improve auditory communication in old age are important, and can be expected to result in improved quality of life for elderly persons. The aim of this research was to determine some characteristics related to the phenomenon, conditions, form manifestation and difficulties caused by the presbycusis. The study included 50 subjects aged 42 to 89, of both genders, 28 men and 22 women. A questionnaire designed for this research was used for the examination, which covered 4 groups of questions: general data, medical history, hearing state and the use of hearing aids. The results show that the average hearing threshold in the examinees ranged from 26.8 dB to 103.7 dB with a descendent configuration symmetrically present on both ears. According to the degree of hearing loss, the most was moderate (42%) and the least profound (4%). Hearing loss occurred progressively in (84%), and tinnitus was present in 70% of subjects. The greatest difficulty caused by hearing loss was present when watching TV, up to 40%. A hearing aid was used by only one person (2%). Based on the results, it can be concluded that hearing loss related to aging was present in both genders with a tendency of deterioration with an increase in age. A small percentage of examinees using a hearing aid indicates low awareness of the elderly about the possibility and benefits of this device.

*Key words: presbycusis, aging, hearing loss*

---

\* This paper is a result of the project “Influence of Cochlear Implantation on Education of Deaf and Hard of Hearing Children” (No. 179055), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## QUALITY OF LIFE OF PERSONS WITH USHER SYNDROME

Ingrid Žolgar\*\*, Tinka Ferkolj, Damjana Kogovšek

*University of Ljubljana – Faculty of Education, Ljubljana, Slovenia*

Usher syndrome, an autosomal recessive disorder refers to a group of genetic conditions that affects hearing, vision and in some cases vestibular function. It is the most common condition cause of deaf-blindness. Combined loss compromises the two primary receptive sensory communication modes, limits activities and restricts full participation in society, affects social life, communication, access to information, orientation and the ability to move around freely and safely. The objective of this descriptive study was to evaluate quality of life in persons with Usher syndrome. The study was conducted with six participants, five females and one male, between 33 and 70 years of age (mean age = 53). A multiple case study approach was used with semi-structured interviews to gather and triangulate data. Verbatim transcripts were analyzed using thematic analysis through open coding, creating categories, and abstraction. In addition, a questionnaire concerning demographic characteristics, communication, level and type of informal support from friends/family, psychosocial well-being, activities of daily living, social functioning, and life space mobility, was designed and explored with descriptive analysis. The findings reveal that persons with Usher syndrome experience difficulties in communication, mobility, daily living functioning, and social interactions. While these experiences may vary between individuals, they generally feel socially isolated, insecure and uncertain about their future. Raising awareness of this unique disability is imperative to ensure that individuals receive the necessary rehabilitation and supportive services to improve their level of independence and quality of life.

*Key words: Usher syndrome, quality of life, multiple case study*

---

\*\* ingrid.zolgar@pef.uni-lj.si

## TINITUS – ETIOPATOGENETSKI FAKTORI I MOGUĆNOST LEČENJA

Snežana Babac<sup>\*\*a,b</sup>, Vladan Milutinović<sup>b,c</sup>

<sup>a</sup>Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

<sup>b</sup>Klinika za otorinolaringologiju Kliničko-bolničkog centra „Zvezdara“, Beograd, Srbija

<sup>c</sup>Univerzitet u Beogradu – Stomatološki fakultet, Beograd, Srbija

Tinitus, odnosno zujanje u uvu, predstavlja percepciju zvuka u odsustvu spoljašnjeg zvučnog izvora. Tinitus je simptom, a ne bolest. Reč potiče od latinske reči „tinnire“ što znači zvoniti. Postoje dve vrste tinitusa: subjektivni i objektivni. Različiti oblici tinitusa imaju različite etiološke faktore i patofiziološke mehanizme. Subjektivni je posledica abnormalne neuronske aktivnosti, dok je objektivni prouzrokovan zvukom koji nastaje u telu i dolazi do uva provođenjem kroz tkiva. Uzroci tinitusa su brojni. Starost, kardiovaskularna oboljenja, cerebrovaskularna oboljenja, različiti lekovi, izlaganje buci, povrede glave i vrata, infekcije herpes virusom, različite povrede slušnog nerva, neurovaskularni konflikt, Menijerova bolest, vestibularni Švanom, otoskleroza, hronični zapaljenski procesi srednjeg uva, su neki od uzročnih faktora koji mogu dovesti do subjektivnog tinitusa. Najčešći objektivni tinitus je vaskularni „pulsatilni“ tinitus koji je sinhron sa otkucajima srca. Takođe, objektivni tinitus može nastati zbog poremećaja temporomandibularnog zgloba, spazma poprečnoprugastih mišića srednjeg uva ili spontanih otoakustičkih emisija. Nakon dijagnostičkog protokola pristupa se lečenju. Lečenje tinitusa se uvek usmerava u pravcu uzroka, ako je on poznat. Kompleksnost tinitusa zahteva interdisciplinarni pristup u lečenju (otorinolaringolog, otolog, neurootolog, neurolog, psihijatar, psiholog, internista). Za sada ne postoji opšteprihvaćena medikamentna terapija za većinu pacijenata sa subjektivnim tinitusom. Savremeni trend u lečenju je tinitus retraining terapija (TRT). Na objektivni tinitus je moguće uticati konzervativnom terapijom ili hirurškim procedurama. Cilj ovoga rada je da prikaže različite etiopatogenetske aspekte i mogućnost terapije tinitusa na osnovu pregleda relevantne literature i internet baza podataka.

*Ključne reči: tinitus, uzroci, lečenje*

---

\*\* babac.snezana@gmail.com

## TINNITUS – ETIOPATHOGENIC FACTORS AND POSSIBILITY OF TREATMENT

Snežana Babac<sup>a,b</sup>, Vladan Milutinović<sup>b,c</sup>

<sup>a</sup>University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade, Serbia

<sup>b</sup>ENT Clinic, Clinical and Hospital Centre “Zvezdara”, Belgrade, Serbia

<sup>c</sup>University of Belgrade – Faculty of Dental Medicine, Belgrade, Serbia

Tinnitus or buzzing in the ear, represents the perception of sound in the absence of an acoustic external stimulus. Tinnitus is a symptom rather than a disease. The word comes from the Latin word “tinnire” which means to ring. There are two types of tinnitus: subjective and objective. Different types of tinnitus have different etiological factor and pathophysiological mechanisms. Subjective tinnitus is the result of abnormal neuronal activity, while objective is caused by the sound that occurs in the body and comes to the ears through the tissues. There are many etiological factors for tinnitus. Old age, cardiovascular diseases cerebrovascular disease, some drugs, noise exposure, head and neck injuries, herpes virus infections, various injuries of cochlear nerve, neurovascular conflict, Meniere’s disease, vestibular Schwannoma, otosclerosis, chronicotitis media, are some of factors that can lead to subjective tinnitus. The most common objective tinnitus is vascular “pulsatile” tinnitus that is synchronized with heart beat. Also, objective tinnitus can be generated by temporomandibular joint dysfunction, by spasms of middle ear muscles or by spontaneous otoacoustic emissions. After the diagnosis, treatment begins. Tinnitus treatment is always directed towards the cause, if known. The complexity of tinnitus requires an interdisciplinary approach to treatment (otorhinolaryngologist, otologist, neurologist, psychiatrist, psychologist, and internist). Until now, there is no generally accepted medication therapy for most patients with subjective tinnitus. The modern trend in treatment is tinnitus retraining therapy (TRT). The objective tinnitus may be influenced by conservative therapy or surgical procedures. The aim of this paper is to present various etiopathogenic factors and possibility of tinnitus therapy based on a review of relevant literature and internet databases.

*Key words: tinnitus, causes, treatment*

# SMETNJE I POREMEĆAJI VIDA

## VISUAL IMPAIRMENTS

---

## THE ROLE OF CENTER IRIS FOR THE BLIND AND PARTIALLY SIGHTED IN THE PROCESS OF ESTABLISHING INCLUSIVE ENVIRONMENT IN SLOVENIA

Katjuša Koprivnikar\*\*

*Center IRIS – Center for Education, Rehabilitation, Inclusion and Counselling for the Blind and Partially Sighted, Ljubljana, Slovenia*

In its documents, the European Agency for the Development of Special Needs Education draws attention to seven key principles for promoting quality in inclusive education. One of them also includes support structures organized to promote inclusion. The Center IRIS–Center for Education, Rehabilitation, Inclusion and Counselling for the Blind and Partially Sighted represents an example of a support structure that develops a range of programs and activities to support blind and partially sighted students in inclusive education. The aim of the program is to influence the raising of the quality of education for all, responding to the needs of the blind and partially sighted students, developing positive attitudes of the teachers towards inclusion of all students, encouraging the management of schools and kindergartens to develop an inclusive vision. Center IRIS is currently in the transforming process into a Center of expertise for visually impaired in Slovenia. It has more than 20 years of experience in the field of inclusive education and represents a basic support system for visually impaired children in kindergartens and schools in Slovenia. Expanded Core Curriculum for visually impaired represents the basis for development and implementation of new support programs in inclusive settings.

*Key words: inclusive education, support systems, blind and partially sighted*

---

\*\* [katjusa.koprivnikar@center-iris.si](mailto:katjusa.koprivnikar@center-iris.si)

## EVOLUCIJA RANE INTERVENCIJE U CENTRU IRIS: IZAZOVI, PRISTUPI I OPTIMALNE STRATEGIJE

Dragana Žunič\*\*

Center IRIS – Center za izobraževanje, rehabilitaciju, inkluziju in svetovanje za slepe in slabovidne, Ljubljana, Slovenija

Koncepti kvalitetan život i aktivno učešće pojedinca i porodice u socijalnom okruženju definisani su kao konačni ciljevi prevencije, rehabilitacije, podrške i edukacije osoba sa teškoćama u razvoju. Praksa je više puta potvrdila da efikasni pristupi u lečenju i u podršci dece sa teškoćama u razvoju u ranom detinjstvu mogu značajno poboljšati funkcioniranje i posledično kvalitet života u kasnijim periodima života, kako deteta tako i njegove porodice. Rana intervencija je ključni deo podrške, koji omogućava zadovoljenje potreba i unapredjenje kvaliteta života dece sa oštećenjem vida i njihovih porodica, pogotovo u ranim fazama prihvatanja i razumevanja detetovih posebnih potreba. Štaviše, dostignuti nivo kvaliteta života pojedinca i njegove porodice je u određenoj meri pokazatelj efektivnosti programa rehabilitacije, kao i prilika da se isti ocene i unaprede. Godina 2019. je važna godina za Centar IRIS – Centra za obrazovanje, rehabilitaciju, inkluziju i savetovanje za slepe i slabovidne. To je godina kada Centar obeležava 100. godišnjicu postojanja i organizovane brige za osobe sa oštećenjem vida u Republici Sloveniji. Istovremeno, 2019. godina je deseta godina od početka razvoja i implementacije prakse rane intervencije za decu sa oštećenjem vida u Centru IRIS za slepe i slabovide. Put razvoja i transformacije programa rane intervencije u našem centru može se opisati kao desetogodišnje putovanje od ničega, preko projektnih aktivnosti, „center-based“ oblike rane intervencije do omogućavanja rane intervencije u porodičnom okruženju dece sa oštećenjem vida. Na ovom putovanju smo se susretali sa različitim izazovima i preprekama, bilo je uspeha i neuspeha. Danas smo jedna od bolje razvijenih praksi rane intervencije u državi. Ovaj članak daje pregled razvoja rane intervencije u Centru IRIS za slepe i slabovide, njene transformacije do današnjeg oblika, kao i pregled upotrebljenih pristupa i strategija ilustrovanih kroz primere dobre prakse za unapredjenje kvaliteta života dece sa oštećenjem vida i njihovih porodica u porodičnom i inkluzivnom okruženju.

*Ključne reči: rana intervencija, pristupi i strategije, deca sa oštećenjem vida, kvalitet života*

---

\*\* dragana.zunic@center-iris.si

## EVOLUTION OF EARLY INTERVENTION PRACTICE IN CENTER IRIS: CHALLENGES, APPROACHES AND OPTIMAL STRATEGIES

Dragana Žunič

*Center IRIS – Center for Education, Rehabilitation, Inclusion and Counselling for the Blind and Partially Sighted, Ljubljana, Slovenia*

The concept of quality of life and active participation of an individual and their family are defined as a final goal of rehabilitation, support and education of persons with special needs. In practice, it has often been established that effective treatment approaches and programs can significantly improve the overall functioning and consequently the quality of life of both the individual and their family. Early intervention proves essential for fulfilling the needs and improving the quality of life of visually impaired children and their families in the early stages of accepting children's special needs and learning how to respond to them. Furthermore, the achieved level of quality of life of an individual and their family is to a certain extent an indicator of effectiveness of approaches and strategies of professional work, as well as the opportunity to evaluate and improve it. 2019 is the year when the Center IRIS for blind and partially sighted celebrates the 100th anniversary of existence of the institution and organized care for the blind and partially sighted in Slovenia. At the same time, the year 2019 is the tenth year of development and implementation of early intervention practice in the Center IRIS and in the Republic of Slovenia. The path of development and transformation of early intervention practice in the Center IRIS can be described as a ten-year-long journey from nothing, through project's support and center based practice towards home-based service. Different challenges and obstacles were encountered during this journey, there were failures and successes. Nowadays, we are one of the better developed early intervention practices in the country. This article provides a review of the developing process of early intervention practice in Center IRIS and a review of approaches and strategies illustrated by examples of good practices to improve the quality of family life both in early intervention and early childhood in inclusion settings.

*Key words: early intervention, quality of life, blind and partially sighted, approaches and strategies*



## SENZIBILIZACIJA VASPITAČA, NASTAVNIKA, STUDENATA I STRUČNIH SARADNIKA ZA RAD SA DECOM OŠTEĆENOG VIDA\*

Danijela Petković\*\*

Škola za učenike oštećenog vida „Veljko Ramadanović“, Zemun, Srbija

Tokom 2017. godine naša škola je realizovala projekat sa našom partnerskom organizacijom, Centrom IRIS iz Ljubljane. Projekat je realizovan kroz Erasmus + program u organizaciji evropske Tempus Fondacije. Realizacijom projekta želeli smo da steknemo uvid u modernu praksu inkluzivne podrške sa ciljem da steknemo iskustvo koje bi nam omogućilo da poboljšamo i modernizujemo podršku koju naša škola pruža slepoj i slabovidnoj, kao i slepoj i slabovidnoj deci sa višestrukim smetnjama i oštećenjima predškolskog uzrasta. Praktično znanje steklo je pet učesnika mobilnog tima naše škole tokom pet dana posmatranja (job shadowing) kako kolege iz Centra IRIS u Ljubljani pružaju podršku na terenu, tj. kako funkcioniše jedan moderan sistem inkluzivne podrške slepoj i slabovidnoj, kao i slepoj i slabovidnoj deci sa višestrukim smetnjama i oštećenjima predškolskog uzrasta. Tokom postmobilne faze, koja je trajala četiri meseca, realizovali smo niz aktivnosti. Realizovana je prezentacija u vezi stečenog iskustva za tiflologe, individualne terapeute i stručne saradnike u našoj školi sa ciljem da unapredimo njihova znanja u vezi modernih inkluzivnih metoda. Realizovali smo radionice za nastavnike, vaspitače i stručne saradnike iz naše škole, za vaspitače i stručne saradnike iz redovnih predškolskih ustanova koji u svojim grupama imaju decu sa oštećenjem vida i sa studentima FASPER-a. Takođe smo osmislili, odštampali i distribuirali brošure u kojima su podaci u vezi sa postojećim programima podrške koje postoje u našoj školi, namenjene interesornim komisijama na teritoriji Beograda, a elektronska verzija brošure poslata je interesornim komisijama u pojedinim gradovima u Srbiji. Zahvaljujući ovom projektu stekli smo praktična iskustva, unapredili kompetencije tiflogologa naše škole na polju pružanja inkluzivne podrške slepoj i slabovidnoj, kao i slepoj i slabovidnoj deci sa višestrukim smetnjama i oštećenjima u redovnim predškolskim ustanovama kao i u našoj školi, uz upotrebu modernih asistivnih tehnologija.

*Ključne reči: inkluzivna podrška, posmatranje na poslu (job shadowing), radionice*

---

\* Rad je nastao kao rezultat istraživanja na Erasmus + projektu "Inkluzivna podrška vizuelno oštećenju i višestruko ometenoj vizuelno oštećenju deci predškolskog uzrasta od 4-6 godina" (br. 2017-1-RS01-KA101-1710), koji finansira Fondacija Tempus.

\*\* danijelaapetkovic@gmail.com

## SENSIBILIZATION OF EDUCATORS, TEACHERS, STUDENTS AND TECHNICAL ASSOCIATES FOR WORKING WITH VISUALLY IMPAIRED CHILDREN\*

Danijela Petković

*School for Visually Impaired Pupils "Veljko Ramadanović", Zemun, Serbia*

During 2017, our school realized the project with our partner organization – CENTER IRIS from Ljubljana. The project was realized within the Erasmus+ Program in organization of Tempus Foundation. Throughout the realization of that project we wanted to gain insight into the modern practices of inclusive support with the goal of gaining experience which will allow us to enhance and modernize the support our school provides to children with visual impairments and children with visual impairments and additional disabilities of preschool age. Five participants of the mobility team from our school gained practical knowledge, during the five days job shadowing in the CENTER IRIS in Ljubljana, regarding the functioning of the modern system of inclusive support provided to children with visual impairments and children with visual impairments and additional disabilities of preschool age. During the post mobility stage which lasted four months, we realized a series of activities. We realized presentation about gained experience for special educators, individual therapists and technical Associates in our school, in order to enhance their knowledge regarding modern inclusive methods. We realized the workshops for educators/technical Associates in our school, with educators/technical Associates of mainstream preschool establishments who work with children with visual impairments in their groups and with students from FASPER. We also created and distributed printed booklets to the interressory committees operating in Belgrade, regarding the existing programs of educational support provided by our school. Thanks to this project we gained practical experience, empowered the competences of our school's special educators for the individuals with visual impairments in the area of inclusive support to children with visual impairments and children with visual impairments and additional disabilities in mainstream preschool facilities, as well as our school, with the use of the modern assistive technologies.

*Key words: inclusive support, job shadowing, workshops*

---

\* This paper is a result of the Erasmus + project "Inclusive support for visually impaired and multiple visually impaired children of 4-6 years of age" (No. 2017-1-RS01-KA101-171), financed by Tempus Foundation.

## EDUKACIJA RODITELJA U OKVIRU PROGRAMA RANE INTERVENCIJE U ŠKOLI ZA UČENIKE OŠTEĆENOG VIDA „VELJKO RAMADANOVIĆ“

Zorica Vladislavljević\*\*

Škola za učenike oštećenog vida „Veljko Ramadanović“, Zemun, Srbija

Tiflološka rana intervencija u školi „Veljko Ramadanović“ postoji od 2002. godine. Od samog početka je naša podrška bila podjednako usmerena prema detetu i prema roditeljima. Godine iskustva i stručnog usavršavanja omogućile su nam da kreiramo programe edukacije roditelja slepe i slabovide, kao i slepe i slabovide dece sa višestrukim smetnjama i oštećenjima. Pokazalo se da je ovo najbolji način da uspešno ojačamo roditeljske kompetencije, da roditelji postanu aktivni partneri u podizanju svog deteta. To je naš veliki cilj u ranoj podršci i zahteva kompleksan pristup. Od 2009. pored individualnih, realizujemo grupne edukacije roditelja, kroz tematske radionice i u kombinaciji sa radionicama psihosocijalne podrške. Na osnovu procene potreba porodice (PPR) i procena deteta, određujemo teme radionica i kreiramo sve radioničke aktivnosti. Grupne edukacije se realizuju u ciklusima od 4 do 8 radionica, uz 2 ili 3 radionice psihosocijalne podrške. Broj učesnika radionice je od 8 do 10, kada dolazi jedan od roditelja, a maksimalno 16, kada dolaze u paru. Poseban kvalitet ovog načina edukacije je uzajamna podrška roditelja u grupi. Ukoliko roditelji to žele, u radionicama mogu da učestvuju bake i deke, bilo da prođu kroz ceo ciklus ili pojedinačne radionice. U planu je kreiranje ciklusa radionica za braću i sestre vizuelno oštećene i višestruko ometene vizuelno oštećene dece. Smatramo da ćemo tako zaokružiti našu podršku i pomoći roditeljima da uspešno podižu svoje dete u podsticajnom porodičnom okruženju. U evaluaciji radionica roditelji navode da bolje razumeju svoje dete, osećaju se kompetentnije kao roditelji jer znaju šta i kako treba da rade. Smatraju da su informacije koje im pružamo razumljive, postupci praktično primenljivi u svakodnevnom životu. Najuspešnije roditelje angažujemo kao saradnike u radionicama i odlično se snalaze.

*Ključne reči: rana intervencija, grupna edukacija roditelja slepe i slabovide, kao i slepe i slabovide dece sa višestrukim smetnjama i oštećenjima, ciklus tematskih radionica*

---

\*\* vladis.zorica@gmail.com

## EDUCATION OF PARENTS WITHIN THE EARLY INTERVENTION PROGRAM IN SCHOOL FOR VISUALLY IMPAIRED PUPILS "VELJKO RAMADANOVIĆ"

Zorica Vladislavljević

*School for Visually Impaired Pupils "Veljko Ramadanović", Zemun, Serbia*

Early intervention at "Veljko Ramadanović" school has existed since 2002. From the very beginning, our support was equally directed towards the VI/MDVI child and the parents. The years of experience and professional development enabled us to create education programs for parents of children with visual impairments and children with visual impairments and additional disabilities. It turned out that this is the best way to successfully strengthen parental competencies, that parents become active partners in raising their child. This is our major goal in early support and requires a complex approach. Since 2009, beside individual ones, we have realized group education for parents, through thematic workshops and in combination with psychosocial support workshops. Based on family needs assessment (PAN) and child assessment, we determine topics of workshops and create all workshop activities. Group education is realized in cycles from 4 to 8 workshops, with 2 or 3 psychosocial support workshops. The number of participants in the workshop is from 8 to 10, when one of the parents comes, and 16 (max), when they come in pairs. The special quality of this mode of education is the mutual support of the parents in the group. If parents want to, grandparents can take part in the workshops, either through the entire cycle or individual workshops. It is planned to create a workshop cycle for siblings of children with visual impairments and children with visual impairments and additional disabilities. We think that we will round up our support and help parents to raise their children successfully in an incentive family environment. In the evaluation of workshops, parents state that they understand their child better, they feel more competent as parents because they know what to do and how to do it. They consider that the information we provide to them is understandable, the procedures are practically applicable in everyday life. We engage the most successful parents as associates in the workshops and they do it very well.

*Key words: early intervention, group education for parents of children with visual impairments and children with visual impairments and additional disabilities, cycle of thematic workshops*

## THE POSITION OF BLIND AND PARTIALLY SIGHTED CHILDREN IN THEIR PEER GROUP

Mateja Maljevac\*\*

*Center IRIS – Center for Education, Rehabilitation, Inclusion and Counselling for the Blind and Partially Sighted, Ljubljana, Slovenia*

The concept of social integration is one of the fundamentals of inclusion and, at the same time, an indicator that demonstrates the quality of life of special needs people. Apart from acquiring academic knowledge, special needs children also need a series of support strategies and adjustment skills in order to equally participate in society. Raising the quality of life is the aim of both inclusive education and education of children and youngsters within specialized institutions. This article sheds some light on certain characteristics of sociometric status of blind and partially sighted children in their peer group, which are the foundation of social acceptance. The research included blind and partially sighted children in inclusive kindergartens and schools, as well as children in the only educational institution for blind and partially sighted in the Republic of Slovenia – Center IRIS. The sample of participants consisted of over 60% of the documented population of blind and partially sighted children in Slovenia aged between 3 and 8. The results show significantly worse position of blind and partially sighted children in comparison to their peers from the earliest age on. What stands out the most is the large share of overlooked children and significantly smaller share of popular children when compared to the peer group. Issues are especially prominent in blind children. In terms of overcoming the issues, the importance of a scientifically founded and professionally planned intervention for each individual child is emphasized.

*Key words: quality of life, social acceptance, blind and partially sighted children, sociometric status*

---

\*\* mateja.maljevac@center-iris.si

## UTICAJ RODITELJA NA SOCIJALNI RAZVOJ DJECE OŠTEĆENOG VIDA

Ivana Zečević\*\*, Bojana Mastilo

Univerzitet u Istočnom Sarajevu – Medicinski fakultet Foča, Foča, Bosna i Hercegovina

Porodica predstavlja bazični okvir za razvoj ličnosti pojedinca, kao i učenje pozitivnih socijalnih ponašanja. Smatra se da dobra porodična sredina može doprinijeti smanjenju problema u ponašanju i razvoju socijalno skladnog ponašanja, što sveukupno doprinosi većem nivou socijalne kompetencije. Navodi se da će djeca koja imaju roditeljsku podršku u odrasloj dobi biti samostalne osobe, sigurne u sebe, sa dobrim socijalnim kontaktima. Sa druge strane, neadekvatan odnos roditelj – dijete manifestuje se kroz niži stepen motivacije, neuspjeh u učenju, društveno nepoželjne oblike ponašanja. Kroz socijalnu interakciju sa roditeljima, slijepo ili slabovido dijete uči da vrednuje sebe, da ocjenjuje svoje vlastite postupke, usvaja prosocijalne oblike ponašanja. Kroz komunikaciju roditelja i slijepog i slabovidog djeteta može se uticati na formiranje interesovanja za svet koji ga okružuje, odnos prema drugima i prema sebi. Pozitivni stavovi roditelja prema oštećenju vida pozitivno se odražavaju na rani socijalni razvoj, što se ogleda kroz bolje socijalne interakcije i bolja akademska postignuća djece oštećenog vida, što kasnije doprinosi većem samopouzdanju. Stav roditelja o socijalnim vještinama slijepo i slabovide djece je jako važan budući da oni više uvažavaju procjene roditelja u odnosu na vršnjake. U periodima adolescencije kad vršnjaci predstavljaju značajan faktor socijalnog razvoja, kod slijepo i slabovide djece su to i dalje roditelji. Ističe se kako roditelji često ispoljavaju nerealna očekivanja koja se manifestuju u vidu što boljih akademskih postignuća slijepo i slabovide djece, a manje kriterijume postavljaju u području socijalnih vještina. Smatra se da podršku stručnjaka treba usmjeriti na upoznavanje roditelja sa načinima na koje će svoju djecu socijalno ohrabriti.

*Ključne reči: roditeljska podrška, socijalni razvoj, slijepa i slabovida djeca*

---

\*\* ivana8898@hotmail.com

## THE INFLUENCE OF PARENTS ON THE SOCIAL DEVELOPMENT OF CHILDREN WITH VISUAL IMPAIRMENT

Ivana Zečević, Bojana Mastilo

*University of East Sarajevo – Faculty of Medicine Foča, Foča, Bosnia and Herzegovina*

The family is a basic framework for the development of an individual's personality, as well as the learning of positive social behaviors. It is considered that a good family environment can contribute to reducing behavioral problems and developing socially consistent behavior, which in turn contributes to a higher level of social competence. It is alleged that children with parental support in adulthood will be self-reliant, self-confident, with good social contacts. On the other hand, inadequate parental – child relationship manifests itself through low levels of motivation, learning failure, socially undesirable forms of behavior. Through social interaction with parents, a child with visual impairments learns to value himself, to evaluate his own actions, to adopt prosocial forms of behavior. Communication between parents and a child with visual impairments, can influence the formation of an interest in the surrounding world, a relationship towards others and towards oneself. Positive attitudes of parents towards visual impairment positively reflect early social development, reflected through better social interactions and better academic achievements of children with visual impairments, which later contributes to greater confidence. Parents' attitudes towards social skills of children with visual impairments are very important since they are more likely to appreciate parental judgment in relation to peers. In periods of adolescence when peers represent a significant factor of social development, for children with visual impairments they are still parents. It is emphasized that parents often exhibit unrealistic expectations, which is manifested in the form of better academic achievements of children with visual impairments, and they set fewer criteria in the field of social skills. It is believed that the support of experts should focus on getting to know parents with ways to encourage their children to socialize.

*Key words: parental support, social development, children with visual impairments*

## WAYS TO ENABLE EQUAL PARTICIPATION OF THE BLIND AND PARTIALLY SIGHTED PUPILS AT KNOWLEDGE COMPETITIONS IN SLOVENIA

Marija Repe Kocman\*\*

*Center IRIS – Centre for Education, Rehabilitation, Inclusion and Counselling for the Blind and Partially Sighted, Ljubljana, Slovenia*

It is very common for pupils and schoolchildren to attend knowledge competitions. Competitions are organized by various institutions, associations, unions, publishing houses etc. and they are prepared for different school subjects, levels/classes. Competitions are suitable for more successful pupils and schoolchildren and are prearranged at different difficulty levels. Also, blind and partially sighted pupils can be successful at different school subjects. Since competitions are destined for the entire population of pupils, they are generally not adapted for blind and partially sighted pupils. For them, at the Center for Education, Rehabilitation, Inclusion and Counselling for the Blind and Partially Sighted we adapt competition tests. In the paper, we will present the development of the cooperation among competition organizers and schools that are being attended by blind and partially sighted pupils. However, the focus of the paper is on the adaptation of competition tests for blind and partially sighted pupils. We will show the good examples of adaptations and give explanations and reasons, why these adaptations are necessary and appropriate. We will also focus on the problems performing knowledge competitions while trying to ensure equal possibilities for blind and partially sighted pupils comparing the entire population. By adapting competition tests for blind and partially sighted pupils, we ensure an equal participation of the visually impaired pupils at different knowledge competitions, allowing them to show what they have learnt at school.

*Key words: knowledge competitions, adaptations of tests, blind and partially sighted, adaptations in large print, adaptations for the blind*

---

\*\* [marija.repe@center-iris.si](mailto:marija.repe@center-iris.si)



## SAMOPROCENA BARIJERA ZA UPRAŽNJAVANJE FIZIČKIH AKTIVNOSTI OSOBA SA OŠTEĆENJEM VIDA\*

Ksenija Stanimirov\*\*, Aleksandra Grbović

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, Beograd, Srbija

Redovna fizička aktivnost je važan faktor poboljšanja ili održavanja dobrog zdravlja kako za pojedinca, tako i za populaciju uopšte. S druge strane, nedovoljna fizička aktivnost je jedan od najčešćih činilaca narušavanja zdravstvenog stanja. U praksi postoji mnogo faktora koji ometaju uključivanje osoba sa oštećenjem vida u različite sportske ili rekreativne aktivnosti, tako da je njihova fizička aktivnost nedovoljna. U okviru dosadašnjih istraživanja izdvojeni su različiti individualni i socio-ekonomski faktori koji mogu da utiču na upražnjavanje fizičkih aktivnosti slepih i slabovidih osoba. Cilj rada je bio ispitivanje razlika osoba sa oštećenjem vida u odnosu na subjektivni doživljaj postojanja barijera za upražnjavanje fizičkih aktivnosti i utvrđivanje faktora koje ove osobe smatraju ključnim u ograničavanju vežbanja. Uzorak je činilo 45 slepih i slabovidih ispitanika uzrasta 18 do 39 godina. Podaci o barijerama za upražnjavanje fizičkih aktivnosti dobijeni su primenom Skale za ispitivanje barijera u upražnjavanju fizičkih aktivnosti za osobe sa oštećenjem vida (*Physical Activity Barrier Scale for persons who are blind or visually impaired*, Lee, Zhu, Ackley-Holbrook, Brower & McMurray, 2014). Rezultati su pokazali da se odrasli ispitanici sa oštećenjem vida najčešće susreću sa barijerama koje proizilaze iz nepristupačnog fizičkog okruženja (AS = 14,84, SD = 4,32), a odmah za njima su se izdvojile i različite barijere psihološke prirode (AS = 13,87, SD = 3,40). Kada su u pitanju međugrupne razlike, statistički značajne razlike u samopercepciji barijera bile su prisutne samo u odnosu na pol – ispitanici ženskog pola smatraju da se suočavaju sa većim brojem barijera za upražnjavanje fizičkih aktivnosti ( $p < 0,05$ ). Opšta preporuka koja proizilazi iz ovog istraživanja je da se aktivno radi na smanjenju uticaja detektovanih barijera, naročito onih koje proizilaze iz nepovoljnog socijalnog okruženja.

*Ključne reči: oštećenje vida, fizička aktivnost, barijere*

\* Rad je nastao kao rezultat istraživanja na projektima „Socijalna participacija osoba sa intelektualnom ometenošću“ (br. 179017) i „Efekti primenjene fizičke aktivnosti na lokomotorni, metabolički, psiho-socijalni i vaspitni status populacije Republike Srbije“ (br. III 47015), a kao deo potprojekta „Efekti primenjene fizičke aktivnosti na lokomotorni, metabolički, psiho-socijalni i vaspitni status populacije osoba sa posebnim potrebama Republike Srbije“, koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

\*\* ksenija.st@sbb.rs

## SELF-ASSESSMENT OF PHYSICAL ACTIVITY BARRIERS OF PERSONS WITH VISUAL IMPAIRMENT\*

Ksenija Stanimirov, Aleksandra Grbović

*University of Belgrade – Faculty of Special Education and Rehabilitation, Belgrade*

Regular physical activity is an important factor in improving or maintaining good health for both the individuals and the population in general. On the other hand, insufficient physical activity is one of the most common factors of health disorders. Due to the beneficial effect on many life aspects, all persons, including those with visual impairments, should exercise. However, in practice, there are many factors that interfere with the involvement of persons with visual impairment in various sports or recreational activities, so their physical activity is often insufficient. Within the framework of the previous research, different individual and socio-economic factors have been found to influence the exercise of the physical activity of blind and visually impaired persons. The aim of the study was to examine the differences among people with visual impairment in relation to the subjective experience of the existence of barriers to exercise and to identify the factors that these people consider crucial in restricting the exercise. The sample consisted of 45 visually impaired respondents aged 18 to 39. Data on barriers for physical activity were obtained by applying *Physical Activity Barrier Scale for persons who are blind or visually impaired* (Lee, Zhu, Ackley-Holbrook, Brower & McMurray, 2014). The results showed that adults with visual impairment primarily encountered barriers that emerge from the inaccessible physical environment ( $M = 14.84$ ,  $SD = 4.32$ ), and the second most common were different psychological barriers. When it comes to intergroup differences, statistically significant differences in the self-perception of barriers were present only in relation to sex – female respondents considered that they faced a greater number of barriers to physical activity ( $p < 0,05$ ). The general recommendation arising from this research is to actively work on reducing the impact of detected barriers, especially those arising from an unfavorable social environment, but also to work on the empowerment and raising awareness of people with visual impairment of the necessity of introducing physical activity into the daily life regime.

*Key words: visual impairment, physical activity, barriers*

\* This paper is a result of the projects “Social Participation of Persons with Intellectual Disability” (No. 179017) and “The Effects of the Application of Physical Activity on the Locomotor, Metabolic, Psycho-Social and Educational Status of the Population of the Republic of Serbia” (No. III 47015), as part of the sub-project “The Effects of the Application of Physical Activities on the Locomotor, Metabolic, Psycho-Social and Educational Status of the Population of Individuals with Special Needs in the Republic of Serbia”, financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

# Indeks autora / Author Index

## A

Adamović Milosav 57, 58  
Ahmad Wasim 89  
Amraei Kourosh 143  
Anđelić Marta 32, 33  
Anđelković Marija 40, 41  
Arsenić Ivana 71, 72, 73, 74  
Avdagić Mirela 38, 39  
Azizi Mohammadparsa 143

## B

Babac Snežana 81, 82, 163, 164  
Banković Slobodan 25, 26  
Betanova Stanislavovna Svetlana 86, 87  
Bijedić Meliha 135  
Bogdanović Lišančić Mina 59, 60  
Bogdan Zupančić Ana 114, 115  
Bogetić Dragica 133, 134  
Bošković Đukić Danica 129, 130  
Brojčin Branislav 25, 26  
Buha Nataša 23, 24, 95, 96  
Bukvić Lidija 138, 139

## Č

Čačko Sana 92  
Čarakovac Mia 109, 110  
Čokić Adela 135  
Čolić Gordana 66, 67

## D

Denić Sanja 59, 60  
Dimić Nadežda 152, 153  
Dmitriev Andreevich Alexey 18, 90  
Drljan Bojana 62, 63, 71, 72  
Dučić Bojan 99, 100  
Dukanac Vesna 138, 139

## Đ

Đoković Sanja 148, 149, 160, 161  
Đorđević Lucija 27, 28  
Đorđević Mirjana 30, 31  
Đorđević Srboljub 27, 28

## F

Fathi Leila 143  
Ferkolj Tinka 162  
Filajdić Milica 40, 41

## G

Gligorović Milica 23, 24, 95, 96  
Glumbić Nenad 44, 45, 103, 104  
Golubović Slavica 64, 65  
Golubović Špela 30, 31  
Grbović Aleksandra 177, 178

## I

Ignjatović Natalija 131, 132  
Ilić Snežana 30, 31, 49, 50  
Ilić Stošović Danijela 49, 50, 51, 52  
Isaković Ljubica 152, 153  
Ivanović Maja 79, 80  
Ivšac Pavliša Jasmina 70

## J

Janjić Jovana 49, 50  
Ječmenica Nevena 64, 65  
Jeličić Ljiljana 150, 151  
Jelić Marija 34, 35  
Jenko Nika 91  
Jocić Vesna 32, 33  
Jovanić Goran 125, 126  
Jovanović Ljiljana 105, 106  
Jovanović Simić Nadica 71, 72, 73, 74  
Jovčić Ljiljana 158, 159  
Józefacka Natalia 29

## K

Kaljača Svetlana 44, 45, 99, 100  
Karić Jasmina 38, 39, 154, 155  
Kermauner Aksinja 20  
Kogovšek Damjana 22, 162  
Kolyagina Gennadyevna Victoria 18, 19,  
86, 87  
Konstantinović Ljubica 83, 84  
Koprivnikar Katjuša 166

Kovačević Jasmina 154, 155, 156, 157  
Kovačević Milica 123, 124  
Kovačević Tamara 148, 149, 160, 161  
Krajčan Mitja 112, 113  
Kuralić Čišić Lejla 135

## L

Legierska Lucyna 29  
Lipec Stopar Mojca 91

## M

Mačešić Petrović Dragana 42, 43, 156, 157  
Mahmoudneghad AliHemat 143  
Maksić Jasmina 55, 56  
Maljevac Mateja 173  
Maljković Marija 129, 130  
Marković Danijel 93, 94  
Marović Mateja 114, 115  
Mastilo Bojana 174, 175  
Matović Milica 136, 137  
Milačić Vidojević Ivona 107, 108, 109, 110  
Milanović Dobrota Biljana 36, 37, 101, 102  
Milićević Iva 158, 159  
Milosavljević Đukić Ivana 121, 122  
Milovanović Tanja 71, 72, 83, 84  
Milutinović Vladan 81, 82, 163, 164  
Mitrović Mirjana 55, 56  
Mršić Ivona 92

## N

Nedović Goran 47, 48  
Nešić Marija 117, 118  
Nikolić Mina 144, 145, 146, 147  
Nikolić Snežana 49, 50, 53, 54  
Nišević Snežana 53, 54  
Novaković Ivana 55, 56  
Novšak Brce Jerneja 22

## O

Odović Gordana 36, 37, 101, 102  
Ostojić Zeljković Sanja 144, 145, 146, 147  
Otašević Jadranka 68, 69

## P

Palibrk Tijana 158, 159  
Pantović Aleksandra 42, 43, 97, 98  
Paradiž Mojca 21

Pavlović Miroslav 44, 45  
Peters Friedhelm 116  
Petković Danijela 169, 170  
Petrović Lazić Mirjana 73, 74, 77, 78  
Petrović Vera 125, 126  
Polak Alenka 21  
Popović Čitić Branislava 117, 118, 138, 139  
Pulec Lah Suzana 21

## R

Radivojević Nevena 64, 65  
Radovanović Vesna 154, 155, 156, 157  
Radulović Danka 131, 132  
Rapaić Dragan 47, 48, 55, 56  
Repe Kocman Marija 176  
Romandić Jovana 105, 106  
Rosandić Monika 70

## S

Singh Chavan Bir 89  
Slavnić Svetlana 150, 151  
Sretenović Ivana 47, 48  
Stanimirov Ksenija 177, 178  
Stanimirović Dragana 40, 41  
Stojanović Marija 119, 120  
Stojković Irena 34, 35  
Stošljević Miodrag 57, 58  
Sukur Željana 75, 76

## Š

Šehović Ivana 73, 74, 77, 78  
Šešum Mia 152, 153  
Šimleša Sanja 70

## T

Tešić Milan 32, 33  
Todorović Vojislav 57, 58  
Tomić Jovana 107, 108

## V

Vasić Jovana 32, 33  
Vasiljević Prodanović Danica 140, 141  
Verkhoturova Yuryevna Natalia 90  
Veselinović Ivana 150, 151  
Vidaković Aleksandra 83, 84  
Vidaković Mirjana 127, 128  
Vladisavljević Zorica 171, 172

Vučinić Vesna 40, 41  
Vujanović Marina 51, 52, 59, 60  
Vuković Matej 116  
Vuković Mile 62, 63, 75, 76

## **W**

Wrona Sylwia 29

## **Z**

Zdravković Ružica 42, 43, 97, 98  
Zečević Ivana 174, 175

## **Ž**

Žolgar Ingrid 162  
Žunić Dragana 167, 168  
Žunić Pavlović Vesna 44, 45, 119, 120

CIP - Каталогизација у публикацији  
Народна библиотека Србије, Београд

376.1-056.26/.36-053.2(048)(0.034.2)  
316.624(048)(0.034.2)  
376.1-053.26/.36(048)(0.034.2)

**МЕЂУНАРОДНИ научни скуп Специјална едукација и рехабилитација данас (10 ; 2019 ; Београд)**

Zbornik rezimea [Elektronski izvor] / 10. међународни научни скуп Специјална едукација и рехабилитација данас, Београд, 25 - 26. октобар 2019. године = Book of Abstracts = The 10th International Scientific Conference Special Education and Rehabilitation Today, Belgrade, September, October, 25 - 26th, 2019 ; [glavni i odgovorni urednik ; editor-in-chief Mile Vuković ; urednici / editors Vesna Žunić Pavlović, Aleksandra Grbović, Vesna Radovanović]. - Београд = Belgrade : Fakultet за специјалну едукацију и рехабилитацију = Faculty of Special Education and Rehabilitation, 2019 (Београд : Fakultet за специјалну едукацију и рехабилитацију). - 1 електронски оптички диск : текст ; 12 cm

Sistemski zahtevi: Nisu navedeni. - Rezimei na srp. i engl. jeziku. - Tiraž 200. - Napomene i bibliografske reference uz tekst. - Registar.

ISBN 978-86-6203-130-3

а) Деца са посебним потребама -- Апстракти б) Поремећаји понашања -  
- Апстракти в) Инклузивно образовање -- Апстракти

COBISS.SR-ID 279857932



UNIVERZITET U BEOGRADU – FAKULTET ZA SPECIJALNU EDUKACIJU I REHABILITACIJU  
UNIVERSITY OF BELGRADE – FACULTY OF SPECIAL EDUCATION AND REHABILITATION