

SPECIJALNA EDUKACIJA I REHABILITACIJA

- SOCIAL NETWORKS USE AND IRRATIONAL BELIEFS
- POKAZATELJI RAZVIJENOSTI REČNIKA KOD DECE
- ZNAKOVANA MUZIKA U KULTURI GLUVIH
- ESP AT UNIVERSITY LEVEL



2021 / Vol. 20 / Br. 4

ISSN 1452-7367

eISSN 2406-1328

UDK 376

Specijalna edukacija i rehabilitacija

Special Education and Rehabilitation

**Univerzitet u Beogradu
Fakultet za specijalnu
edukaciju i
rehabilitaciju**



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Časopis izlazi četiri puta godišnje.

Indeksirano u: SCIndeks, Scopus, DOAJ

Izdavanje časopisa finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

Otvoreni pristup
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PUBLISHER

University of Belgrade
Faculty of Special Education and Rehabilitation

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The journal is published four times a year.

Indexed in: SCIndeks, Scopus, DOAJ

The publication of the journal is financed by the
Ministry of Education, Science and Technological
Development of the Republic of Serbia.

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Use of social networks in emerging adults: The role of irrational beliefs

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Introduction. The use of online social networks has become widespread among the young. Although it may have beneficial effects, it has been established that some people develop problematic or excessive use of social networks which may negatively impact their psychosocial functioning. *Objective.* The aim of the present study was to investigate social networks use among emerging adults and to explore whether irrational and rational beliefs as conceptualized within the Rational-Emotive & Cognitive-Behavior Therapy (RE&CBT) framework predict problematic social networks use. Following RE&CBT framework, we hypothesized that irrational beliefs are positively, and rational beliefs negatively related to problematic social networks use. *Methods.* The sample included 210 emerging adults (age range 18–26, $M = 21.08$, $SD = 2.02$), 59.0% females. Serbian version of the General Attitude and Belief Scale (SGABS) was used for the assessment of irrational and rational beliefs. Serbian version of Internet Addiction Test was adapted for the assessment of problematic social networks use. *Results.* The results supported the hypothesis that irrational beliefs are positively related to problematic social networks use. When controlling for intercorrelations between beliefs, demands for love and approval from others stood out as a single significant predictor of problematic social networks use. Rational beliefs were unrelated to problematic social networks use, thus not supporting the hypothesis. *Conclusion.* The results suggest that RE&CBT approach, which has been proven to be efficacious in prevention of various problems of psychosocial functioning may also provide framework for supporting young people to use social networks in a constructive way.

Keywords: problematic social networks use, irrational beliefs, rational beliefs, Rational-Emotive & Cognitive-Behavioral approach, emerging adults

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Introduction

The use of social networks

Internet-based communications have developed intensely during the last decades and have penetrated various spheres of everyday life of the young. Internet is used for various purposes: getting information, shopping, entertainment, education, etc. Social network sites (e.g. Instagram, Twitter, Snapchat), as a domain of Internet communication, have been vastly accepted among persons of different ages, but especially among the young. Social network sites are “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.” (Boyd & Ellison, 2008, p. 211). There are studies which show that social networking has become the most popular online activity, especially among young people (e.g., Griffiths & Szabo, 2014).

Social networks may provide a broad avenue for the development of young people and may positively contribute to that development. It was shown that social networks are used for self-initiated enterprise and self-directed learning (Tan & Kim, 2019). Furthermore, they enable formation and maintenance of the bridging and the bonding social capital (Ellison et al., 2007). The former refers to weak ties among members of large and diffuse relationship networks, and the latter to close relationships between friends and family members. Other studies also found an association between social networks use and friendship closeness among adolescents (Antheunis et al., 2016; Rousseau et al., 2019). Given the importance of friendships for emotional adjustment of young people (Brown & Klute 2003), it may be expected that the use of social networks positively contributes to well-being. Indeed, it was shown that social capital and feelings of connectedness provided by social networks contribute to subjective well-being. However, this seems to hold only for active users of social network sites, while passive use is related to lower subjective well-being because of social comparison and envy (Verduyn et al., 2017). Social network use may also contribute positively to identity development of typical adolescents (e.g., Davis, 2013), as well as adolescents who belong to minority groups such as sexual minority groups (Bates et al., 2020).

Although there are findings which support beneficial effects of social networks for the development of the young, negative effects were also established. Allen et al. (2014) point out that research evidence on the relationship between use of social networks and adolescents' sense of belonging, psychosocial well-being and identity development is mixed. A systematic review showed that the use of social networks is related to depression and anxiety although the effects are small (Piteo & Ward, 2020). Another review study suggests that

there is a negative relationship of a small size between social media use and psychological well-being (Orben, 2020). Shah et al. (2020) point to research that shows negative effects of social networks use in terms of low self-esteem and body satisfaction, higher risk of cyber-bullying and risky sexual behavior.

Problematic social networks use

Various factors may explain equivocal findings regarding social networks use and psychosocial functioning of the young, such as the type and structure of the networks a person belongs to, and the type of activities she/he undertakes. One prominent aspect of social networks use, which is related to negative effects, is excessive use. Excessive or problematic use of social networks is considered to be a form of behavioral addiction. Behavioral addictions are characterized by a diminished control, which is a core defining feature of substance-use addictions, but over behaviors not related to ingestion of a psychoactive substance (Grant et al., 2010). Although there is a debate whether the concept of behavioral addictions is warranted (e.g. Billieux et al., 2015; Petry et al., 2018) research on behavioral addictions expands.

Internet addiction as a form of behavioral addiction has been extensively investigated since Young introduced the concept in 1990's (Young, 1997). However, it has been suggested that the notion of Internet addiction is heterogeneous and that, instead, specific forms of behaviors, which may become excessive through the use of Internet as a medium, should be investigated (e.g., Starcevic & Aboujaoude, 2017). One of such behaviors is social networks use (Müller et al., 2016).

Various terms are used to denote excessive social networks use, such as compulsive social networks use, social networks addiction, and problematic social networks use. In their review study, Anfreassen and Pallesen (2014) use the term social networks sites addiction and define it as being overly concerned about these networks, and being driven to devote time and effort to these networks to a degree that impairs an individual's social, academic, and professional activities, as well as psychological health and well-being.

Studies on representative national samples showed that about 4.5% percent of Hungarian adolescents (Bányai et al., 2017) and about 2.9% of adults in Belgium (De Cock et al., 2014) suffer from problematic social networks use. Recently, the concept of Internet communication disorder has begun to be investigated, referring to dysfunctional use of social networks and messaging applications (e.g., WhatsApp) (Wegmann et al., 2018). However, majority of studies have concentrated on social networks use. Also, there is a lack of empirical evidence on whether the use of social networks and messaging applications may be regarded as a unitary phenomenon.

Problematic or excessive social networks use is related to various negative aspects of psychosocial functioning in adolescents and young adults: lower

self-esteem (Kalpidou et al., 2011), lower academic achievement (Kirschner & Karpinski, 2010), and disconnection or isolation from peers (Barker, 2009). Numerous studies point to the association between problematic social networks use and psychopathological tendencies, especially anxiety and depression (Oberst et al., 2017; Pontes, 2017; Pontes et al., 2018; Sampasa-Kanyinga & Lewis 2015). It is also related to other addictions such as Internet addiction and problem drinking (Hormes et al., 2014). Longitudinal studies suggest that the relationship between social networks use and psychopathological tendencies might be bidirectional, with psychopathology predicting an increase in social network use (Gámez-Guadix, 2014) and vice versa (Chen et al., 2020; Gámez-Guadix, 2014).

Given the expansion of social networks use and their relevance for psychosocial functioning, an important question is what predisposes persons for problematic social networks use. Przybylski et al. (2013) introduced the concept of the Fear of Missing Out (FoMO), defined as “a pervasive apprehension that others might be having rewarding experiences from which one is absent” (Przybylski et al., 2013, p. 1841). Further studies have confirmed that FoMO is related to problematic social networks use (e.g., Beyens et al., 2016; Oberst et al., 2017; Wegmann et al., 2017), and showed it to be a mediator of the relationship between psychopathological tendencies and problematic social networks use (Wegmann et al., 2017). Beyens et al. (2016) reported that FoMO mediates the relationship between psychological needs for belonging and popularity and stress related to Facebook use.

Recently, the Interaction of Person-Affect-Cognition-Execution (I-PACE) model of the development and maintenance of specific Internet-related and other addictive behaviors has been developed (Brand et al., 2016, 2019). The model explains development and maintenance of addictive behaviors through interaction of personal core characteristics as predispositions, affective and cognitive responses to specific stimuli, and executive functions. In accordance with the model, the role of narcissism, reward sensitivity and impulsivity in problematic social networks use was elucidated (Lyvers et al., 2019). Further, it was shown that impulsivity contributes to problematic social networks use especially when it is accompanied by deficiencies in executive functions and specific inhibitory control (Wegmann et al., 2020). Other personal core characteristics, besides narcissism, impulsivity and reward sensitivity, which might contribute to problematic social networks use, are worth investigating. Rational and irrational beliefs, as conceptualized in rational emotive and cognitive behavioral theoretical framework may be relevant in this regard.

Rational Emotive and Cognitive Behavior Therapy (RE&CBT) theoretical framework

Given the expansion of social networks use and their relevance for psychosocial functioning, an important question is what predisposes persons for problematic social networks use. Theoretical framework of RE&CBT posits that cognitions in form of beliefs play an important role in emotional and behavioral functioning of individuals (DiGiuseppe et al., 2014; Ellis & Dryden, 1997).

RE&CBT distinguishes between rational and irrational beliefs. Rational beliefs are preferential evaluative cognitions, whereas irrational beliefs are absolutistic evaluations in form of “musts” or “shoulds” (Ellis & Dryden, 1997). Rational beliefs are flexible or non-extreme, consistent with reality and logical. Contrary to that, irrational beliefs are rigid or extreme, inconsistent with reality, and illogical. RE&CBT theory posits four types of rational beliefs: non-dogmatic preferences, non-awfulizing beliefs, high frustration tolerance beliefs, and self-, other-, and life-acceptance beliefs. These beliefs lead to functional emotions and adaptive behaviors. Opposed to them are four types of irrational beliefs: absolutistic demands, awfulizing beliefs, low frustration tolerance beliefs, and self-, other-, and life-depreciation beliefs. These beliefs lead to dysfunctional emotions and behaviors.

There is empirical evidence that irrational beliefs are related to various forms of psychosocial malfunctioning and self-defeating behaviors (Szentagotai & Jones, 2010), as well as to emotional disorders and symptoms (David et al., 2010). On the other hand, research on the relationship between rational beliefs and emotional and behavioral outcomes is less consistent and suffers from methodological flaws (David et al., 2010). The role of irrational beliefs in Internet-related addictions was established in a previous study which showed a relationship between irrational beliefs and Internet gaming addiction among high school and university students (Vukosavljevic-Gvozden et al., 2015). Specifically, factors of irrational beliefs – other-downing, self-downing, need for achievement, need for approval, demands for fairness, and need for comfort correlated with internet gaming addiction, while rational beliefs were uncorrelated with internet gaming disorder.

The present study

The aims of the study are the following: 1) to investigate social networks use during emerging adulthood, i.e., to investigate the distribution of study participants within particular categories of normal and problematic social networks use; and 2) to explore whether irrational and rational beliefs as conceptualized within the RE&CBT framework predict social networks use. In accordance with I-PACE model (Brand et al., 2016, 2019), these beliefs may be regarded as core personal characteristics which may predispose individuals for problematic social networks use.

Emerging adulthood is a period of life spanning from the end of adolescence to the undertaking of young adults' decisions regarding love, work, and worldviews (Arnett, 2000). It is a period of identity exploration and experimentation and persons in this developmental period are especially prone to substance and behavioral addictions (Sussman & Arnett, 2014). Elucidating the relationship between irrational/rational beliefs and problematic social networks may contribute to scientific understanding and provide directions for practice of supporting the functional, non-problematic use of social networks by the young.

Based on the postulates of RE&CBT theory, that irrational beliefs are conducive to dysfunctional emotions and behavior, whereas rational beliefs lead to functional emotions and adaptive behavior (e.g. Ellis, 1994), and on empirical evidence that endorsement of irrational beliefs is related to various dysfunctional behaviors (Szentagotai & Jones, 2010) and psychopathological tendencies (Browne et al., 2010), and on empirical evidence, albeit weaker, that rational beliefs contribute to emotional well-being and adequate psychosocial functioning (Caserta et al., 2010; Oltean & David, 2018), we hypothesize the following:

Hypothesis 1: Irrational beliefs are positively related to problematic social networks use, and the group of persons who display problematic social networks use have higher scores of irrational beliefs compared to the group with non-problematic social networks use.

Hypothesis 2: Rational beliefs are negatively related to problematic social networks use, and the group of persons who display problematic social networks use have lower scores of rational beliefs compared to the group with non-problematic social networks use.

Methods

Sample and procedure

The convenience sample included 210 emerging adults (age range from 18 to 26 years, $M = 21.08$, $SD = 2.02$), 59.0% females, who study at the Faculty of Special Education and Rehabilitation, University of Belgrade, or were recruited through personal contacts of students of that faculty. The questionnaires were administered online. Participants were informed on the purpose of study in written form prior to responding to questionnaires.

Variables and measures

Irrational and rational beliefs

Serbian Version of the General Attitude and Belief Scale (SGABS; Marić, 2002, 2003), an adaptation of the General Attitude and Belief Scale (GABS; Bernard, 1998; DiGiuseppe et al. 1988), was used for the assessment of rational and irrational beliefs. The scale consists of 37 items, 29 of them reflecting irrational and 8 reflecting rational beliefs. Participants indicate the extent to which they agree with each statement on a 5-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree. We applied principal components analysis with promax rotation on the items expressing irrational beliefs. The analysis using Cattell's scree plot yielded four factors of irrational beliefs: Demands for other persons' correctness and other-depreciation, Perfectionist demands toward oneself, Demands for love and approval from others, and Self-depreciation. Mean scores for each type of irrational beliefs were obtained by averaging the items with highest pattern coefficients on the corresponding factor. Mean score of rational beliefs was obtained by averaging the items expressing rational beliefs. The reliability of irrational beliefs' scales was good with Cronbach's alphas ranging from .82 to .87. The reliability of rational beliefs' scale was below acceptable ($\alpha = .60$).

Problematic social networks use

Serbian version of Internet Addiction Test (Popović-Ćitić & Marković, 2013) was adapted for the assessment of problematic social networks use by replacing the term "internet" with the term "social networks", following the procedure by Musetti et al. (2021). Further, as the Serbian version is constructed for the use with school-aged children and adolescents, in order to make it suitable for emerging adults, we slightly changed some items, for example by adding work and faculty obligations to formulations referring to school assignments. The scale consists of 20 items. The items refer to problems in controlling the time spent on social networks, interpersonal conflicts due to social networks use, neglect of duties, disturbed sleep, preoccupation with social networks while offline, using social networks to escape from disturbing feelings. For each item, respondents are asked to select the response which best describes them on a 6-point Likert scale ranging from 0 – never to 5 – always. The reliability of the scale established in this study was high ($\alpha = .90$). The total scores may range from 0 to 100. Young (2011) made the following classification of total scores: normal use (0–30), mild problematic use (31–49); moderate problematic use (50–79) and severe problematic use (80–100). Normal use means that the person can control the use of social networks so that her obligations and interpersonal relations are not disturbed, mild and moderate problematic use refers to frequent problems, and severe problematic use refers to serious problems related to social networks use (Popović-Ćitić & Marković, 2015).

Results

Descriptive statistics for study variables

Descriptive statistics for study variables are presented in Table 1.

Table 1

Descriptive statistics for study variables

Variable	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>Shapiro-Wilk's</i>
Problematic social networks use	1.00	94.00	27.54	14.29	.96*
Demands for other persons' correctness and other-depreciation	1.00	5.00	2.10	0.85	.91*
Perfectionist demands toward oneself	1.36	4.73	2.80	0.75	.98*
Self-depreciation	1.00	4.40	1.40	0.66	.65*
Demands for love and approval from others	1.00	5.00	2.85	1.06	.97*
Rational beliefs	2.00	5.00	4.08	0.56	.97*

Note. * $p < .01$

According to Shapiro Wilk's test, distributions of all study variables significantly deviated from normal distribution (Table 1). Thus, we used normalized scores based on Blom's formula in analyses of the relationship between study variables.

Distribution of subjects in particular categories of problematic social networks use

In accordance with the first aim of the study, to investigate the distribution of participants regarding social networks use, we classified subjects into particular categories of problematic social networks use based on cut-off points devised by Young (2011) for classification of Internet addiction according to Internet addiction test. The classification is presented in Table 2.

Table 2

Distribution of subjects in particular categories of problematic social networks use

Problematic social networks use category (score range)	<i>n</i>	<i>%</i>
Normal social networks use (0–30)	130	61.9
Mild problematic social networks use (31–49)	64	30.5
Moderate problematic social networks use (50–79)	15	7.1
Severe problematic social networks use (80–100)	1	0.5
Total	210	100

The further analyses were performed on the whole study sample. In accordance with the second aim of the study, and in order to test the hypotheses that irrational beliefs are positively, and rational beliefs negatively related to problematic social networks use, bivariate correlations were employed.

Bivariate correlations between study variables

Bivariate correlations between study variables are presented in Table 3.

Table 3

Bivariate correlations between study variables (Pearson r)

Variable	1	2	3	4	5	6
1. Problematic social networks use						
2. Demands for other persons' correctness and other-depreciation	.23***					
3. Perfectionist demands toward oneself	.22**	.47***				
4. Self-depreciation	.22**	.30***	.48***			
5. Demands for love and approval from others	.30***	.39***	.44***	.32***		
6. Rational beliefs	-.13	-.24***	-.34***	-.35***	-.29***	

Note. ** $p < .01$, *** $p < .001$

Problematic social networks use is significantly positively related to all irrational beliefs, with Demands for love and approval from others showing moderate and other irrational beliefs low correlation with problematic social networks use. Problematic social networks use is unrelated to rational beliefs. All types of irrational beliefs are positively interrelated (correlations are of moderate size), while they show negative correlations (low to moderate) with rational beliefs.

Multiple regression analysis with problematic social networks use as dependent variable and irrational and rational beliefs as predictors

In order to investigate the relative contribution of different types of beliefs to social networks use, multiple regression was performed. The results of multiple regression analysis for prediction of problematic social networks use from irrational and rational beliefs are presented in Table 4. The multiple regression model was statistically significant ($F(96,5) = 5.40$, $p < .01$). The predictors accounted for 12% of variance in Problematic social networks use. As shown in Table 4, Demands for love and approval from others is the only significant predictor of problematic social network use when taking into account the interrelationships between different types of beliefs ($\beta = .23$, $p < .01$).

Table 4

Results of multiple regression for predicting problematic social networks use from irrational and rational beliefs

Variable	<i>B</i>	<i>SE_B</i>	β
Demands for other persons' correctness and other-depreciation	0.11	0.08	.10
Perfectionist demands toward oneself	0.03	0.09	.03
Self-depreciation	0.12	0.09	.10
Demands for love and approval from others	0.23	0.08	.23**
Rational beliefs	0.02	0.08	.02

Note. ** $p < .01$

Results of multivariate analysis of variance: differences in irrational and rational beliefs between subjects with problematic and non-problematic social networks use

In accordance with the second aim of the study, and to test the hypotheses that the groups of participants with normal vs. problematic social networks use (aggregated mild, moderate and severe categories) differ in the level of irrational and rational beliefs a multivariate analysis of variance was performed. There was a statistically significant difference between the groups with normal vs. problematic social networks use on the combined variables of rational and irrational beliefs ($F(5, 205) = 3.12, p = .010$, Wilks' Lambda = .93). The results for the types of beliefs considered separately are presented in Table 5.

Table 5

Results of multivariate analysis of variance: differences in irrational and rational beliefs between subjects with problematic and non-problematic social networks use

Variable	Non-problematic social network use		Problematic social network use		<i>F</i> (1, 209)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Demands for other persons' correctness and other-depreciation	-0.18	0.96	0.31	0.93	12.72***
Perfectionist demands toward oneself	-0.13	0.96	0.27	0.94	8.34**
Self-depreciation	-0.07	0.80	0.24	0.89	6.31*
Demands for love and approval from others	-0.14	0.96	0.23	0.97	7.49**
Rational beliefs	0.09	0.92	-0.10	1.03	1.79

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Results in Table 5 show that subjects with problematic social networks use have significantly higher levels of all types of irrational beliefs compared to subjects with non-problematic social networks use, while differences in rational beliefs between the two groups are not statistically significant. When Bonferroni adjusted p value for the number of comparisons is applied (.01) differences regarding self-depreciation are no more significant.

Discussion

The aims of the present study were to investigate social networks use among persons in emerging adulthood and to explore relationships between irrational and rational beliefs as conceptualized within RE&CBT framework and level of problematic social networks use.

The results show that approximately 60% of participants display non-problematic social networks use. Thus, we may presume that for the majority of the participants, the use of social networks may have beneficial effects such as those established in previous studies regarding education (Tan & Kim, 2019), formation and maintenance of social relations (Antheunis et al., 2016; Ellison et al., 2007; Rousseau et al., 2019) and identity consolidation (e.g. Davis, 2013). However, about 40% of participants display problematic social networks use. About 30% experience mild problems related to social networks use, while about 7% experience moderate, and 0.5% severe problematic social networks use. A comparison with other studies regarding the distribution of social networks use is constrained due to the fact that different studies use different measures and different criteria to determine problematic social networks use. A study by Musetti et al. (2021) also used the adapted version of Internet Addiction Test in a sample of 13 to 19 year old Italian adolescents. The study showed that about 14% of adolescents belong to categories of moderate or severe problematic social networks use, while the percentage of persons belonging to these categories in our sample is around 7%. Although this difference might suggest cultural and/or age differences, it is not justified to make such interpretations due to the small size and the unrepresentativeness of samples.

Albeit majority of the participants who display problematic social networks use in our sample belong to the category of mild problematic use, it is important to investigate which factors predispose persons for problematic social networks use. Research in this field is still relatively scarce.

In accordance with the Hypothesis 1, all types of irrational beliefs are positively related to problematic social networks use, and persons with problematic social networks use as a group have higher average levels of irrational beliefs compared to non-problematic users. This suggests that endorsement of irrational beliefs may contribute to problematic social network use. Persons who display problematic social networks use (from mild to severe) display higher

levels of all four types of irrational beliefs. i.e., demands for other persons' correctness and other-depreciation, perfectionist demands toward oneself, demands for love and approval from others, and self-depreciation, compared to persons with non-problematic use. Results of multiple regression suggest that, when intercorrelations between beliefs are taken into account, demands for love and approval from others stand out as the single significant predictor of problematic social networks use. This is in line with previous findings on the importance of FoMO as a mechanism of excessive social networks use. We assume that irrational demands for other's love and approval may be a driving force behind FoMO. As Turkle (2011) pointed out, social networks provide numerous connections which are fast developing and superficial, thus preventing development of intimacy. Due to the lack of intimacy, persons try to find solace in even more connections, according to Turkle. So, this makes a vicious cycle and persons who irrationally demand love and approval from others may be especially prone to enter such a cycle. The results suggest that all irrational beliefs are important to be targeted in treatment and prevention of problematic social networks use, but especially demands for love and approval from others.

The results did not support the Hypothesis 2, as rational beliefs were unrelated to problematic social networks use in the present study. A previous study using SGABS also found no significant associations between rational beliefs and internet gaming disorder (Vukosavljevic-Gvozden et al., 2015). These findings are contrary to theoretical assumptions on the protective role of rational beliefs regarding emotional and behavior malfunctioning which has also received empirical support (Caserta et al., 2010). Besides, the scale of rational beliefs showed low reliability in present study. Caserta et al. (2010) point out that rational beliefs are less investigated compared to irrational beliefs and that further developments in terms of methods of their assessment are needed.

RE&CBT interventions (educational, counseling and psychotherapeutic) have proven to be efficacious for various problems in psychosocial functioning, and to lead to positive outcomes pertaining to emotional, behavioral, cognitive and psychophysiological functioning, health, school performance, social skills, and quality of life, as shown by a review and meta-analytic study (David et al., 2018). Further, the study provided empirical evidence that the mechanism of the improvement is through the change of irrational beliefs.

Within the RE&CBT framework, numerous prevention programs have been developed. Mostly, these programs have a general aim of supporting emotional well-being and adequate psychosocial development of the young. Among the most well-known programs are Rational -emotive Education (Knaus, 1974) and You Can Do IT! Education (Bernard, 2003), (for a review of these and other prevention programs within RE&CBT, see Vernon & Bernard, 2006). Changing irrational beliefs and strengthening rational thinking are among core

principles of these programs. There is empirical evidence on the effectiveness of these programs (Knaus, 2006). Given the findings of the present study, on the relationship between irrational thinking and problematic social networks use, we may presume that prevention programs based on RE&CBT framework may contribute to prevention of problematic social media use, although this hasn't yet been empirically investigated.

Lupu and Lupu (2013) developed and evaluated a gambling prevention program for adolescents which combined general Rational emotive education and the specific program focusing on providing information about gambling and gaming through an interactive software. The combined program outperformed Rational emotive education program regarding changes in erroneous cognitions about gambling. Following this, designing prevention programs for problematic social networks use might combine general principles of RE&CBT approach and specific interventions regarding social networks use such as informing the young on possible negative consequences of excessive use.

In a study which also used SGABS (Vukosavljević-Gvozden et al., 2010), the same factors of irrational beliefs were obtained as in our study, suggesting stable factorial structure of the instrument. Further, the results of that study showed that, when controlling for intercorrelations between beliefs, demands for other persons' correctness and other-depreciation and perfectionist demands toward oneself are significant predictors of antisocial behavior in adolescents, with the former showing a positive and the latter a negative relationship with antisocial behavior. These results, taken together with the results of the present study, suggest that various types of irrational beliefs are generally related to problems of psychosocial functioning, but that their influence is also relatively specific depending on the type of the problem. Similarly, a study comparing personality profiles related to various forms of addictions revealed personality distinctions among different types of addictions (Zilberman et al., 2018). Contrary to this, a meta-analytic study showed that different types of irrational beliefs showed a similar pattern of relationships with various indices of psychological distress with the exception of low frustration tolerance beliefs which showed higher correlations with various psychological stress variables compared to other types of irrational beliefs. (Višlā et al., 2016). The question of general vs. specific relationships between different types of irrational beliefs and various forms of emotional and behavioral malfunctioning requires further investigation.

The relationship between irrational beliefs and social networks use, as shown by bivariate correlations, is weak to moderate. Taken together, irrational and rational beliefs explain about 12% of variance in social networks use. This suggests that future research should aim to investigate other variables which, in interaction with irrational beliefs, or independently, contribute to social networks use. In accordance with the I-PACE model (Brand et al., 2016, 2019), irrational beliefs might be investigated in interaction with executive functions.

Problematic social network use was assessed in the present study by adapting the Serbian version of IAT (Popović-Ćitić & Marković, 2013). Several other studies have used the same procedure of applying the instruments constructed for other behavioral addictions to problematic social networks use. For example, Musetti et al. (2021) also used the adaptation of IAT, while Paschke et al. (2021) used an adaptation of a gaming disorder scale. There are also scales which have been specifically developed for problematic social networks use (Andreassen et al., 2017; Li et al., 2020). We decided to use the adaptation of the IAT because the instrument has been validated for use in our society (Popović-Ćitić & Marković, 2013). Further research is needed to compare psychometric properties of various instruments of problematic social networks use.

Limitations and implications for future studies

In the present study a relatively small, unrepresentative sample of emerging adults was used, thus limiting possibilities of generalization of the findings. Also, cross-sectional design of the study does not provide answers regarding the direction of influence between beliefs and problematic social networks use. Besides overcoming these limitations, future studies should focus on the relationship between problematic social networks use and other dysfunctional activities performed through the Internet, and investigate common and specific mechanisms which lead to them. This would provide information on designing prevention programs that would target various forms of Internet-related problematic activities. Further, assessment of irrational beliefs and social networks use through experience sampling methods could provide more insights on their relationship and mechanisms of that relationship. Related to this, the development of specific measures of irrational beliefs regarding social networks use might be considered in future studies.

Conclusion

The present study suggests that irrational beliefs as conceptualized within RE&CBT, especially demands for love and approval from others, contribute to problematic social networks use. These findings add to the empirical basis that may serve as a foundation for designing prevention and treatment programs for this form of dysfunctional Internet use.

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Korišćenje društvenih mreža među mladima: Uloga iracionalnih uverenja

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Uvod: Korišćenje društvenih mreža na internetu je postalo široko rasprostranjeno među mladima. Mada ono može imati povoljne efekte, ustanovljeno je da neke osobe razvijaju problematično ili preterano korišćenje društvenih mreža što može imati negativno dejstvo na njihovo psihosocijalno funkcionisanje. *Cilj:* Cilj ove studije bio je da se istraži korišćenje društvenih mreža među mladima i da se ispita da li iracionalna i racionalna uverenja shvaćena sa stanovišta racionalno-emocionalne i kognitivno-bihevioralne terapije (RE i KBT) predviđaju problematično korišćenje društvenih mreža. U skladu sa RE i KBT pristupom, pretpostavili smo da su iracionalna uverenja u pozitivnoj, a racionalna uverenja u negativnoj korelaciji sa problematičnim korišćenjem društvenih mreža. *Metode:* Uzorak je obuhvatio 210 mladih osoba (starosti od 18 do 26 godina, $AS = 21.08$, $SD = 2.02$) od kojih je 59.0% ženskog pola. Srpska verzija Skale opštih stavova i uverenja je korišćena za procenu iracionalnih i racionalnih uverenja. Srpska verzija Testa zavisnosti od interneta je prilagođena za procenu problematičnog korišćenja društvenih mreža. *Rezultati:* U skladu sa pretpostavkom, iracionalna uverenja su u pozitivnoj korelaciji sa problematičnim korišćenjem društvenih mreža. Kada su kontrolisane interkorelacije između uverenja, zahtevi za ljubavlju i odobravanjem od strane drugih su se izdvojili kao jedini značajan prediktor problematičnog korišćenja društvenih mreža. Racionalna uverenja nisu povezana sa problematičnim korišćenjem društvenih mreža, suprotno pretpostavci. *Zaključak:* Rezultati ukazuju da RE i KBT pristup, koji se pokazao kao delotvoran u prevenciji različitih oblika psihosocijalnih problema, može predstavljati okvir za pružanje podrške mladima da koriste socijalne mreže na konstruktivan način.

Ključne reči: problematično korišćenje društvenih mreža, iracionalna uverenja, racionalna uverenja, racionalno-emocionalni i kognitivno-bihevioralni pristup, mladi

PRIMLJENO: 17.06.2021.

REVIDIRANO: 15.09.2021.

PRIHVACENO: 20.09.2021.



Fonološka svesnost, verbalna radna memorija i brzo automatsko imenovanje kao pokazatelji razvijenosti rečnika kod dece predškolskog uzrasta

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Uvod: Prema modelu leksičkog restrukturiranja, razvoj rečnika pokreće razvoj fonoloških reprezentacija. Stoga se može predvideti da će deca sa razvijenim rečnikom posedovati vrlo specifične fonološke reprezentacije reči. *Cilj:* Cilj istraživanja je da se utvrdi značaj fonološke svesnosti, verbalne radne memorije i brzog automatskog imenovanja kao pokazatelja razvijenosti ekspresivnog i receptivnog rečnika kod dece predškolskog uzrasta. *Metode:* Istraživanjem je obuhvaćeno 86 dece tipičnog razvoja. Za procenu fonološke svesnosti, verbalne radne memorije, brzog automatskog imenovanja, ekspresivnog i receptivnog rečnika korišćeni su supstestovi koji predstavljaju deo Clinical Evaluation of Language Fundamentals – Fourth Edition baterije. *Rezultati:* Rezultati istraživanja pokazuju da model koji objedinjuje uzrast, fonološku svesnost, verbalnu radnu memoriju i brzo automatsko imenovanje predviđa 51% varijanse postignuća na zadacima procene ekspresivnog rečnika ($F = 7.73$, $df1 = 2$, $df2 = 75$, $p < .001$) i 38% varijanse postignuća na zadacima procene receptivnog rečnika ($F = 4.65$, $df1 = 2$, $df2 = 75$, $p < .001$). U konačnom modelu kao statistički značajni pokazatelji ekspresivnog rečnika ističu se samo zadaci identifikacije i supstitucije fonema, kao i brzo automatsko imenovanje ($p < .05$). Sa druge strane, kao statistički značajni pokazatelji receptivnog rečnika ističu se analiza i sinteza fonema, verbalna radna memorija i brzo automatsko imenovanje ($p < .05$). *Zaključak:* Dobijeni rezultati pokazali su da uzrast, fonološka svesnost, verbalna radna memorija i brzo automatsko imenovanje imaju značajan doprinos u razvoju rečnika kod dece pre formalne obuke čitanja.

Ključne reči: fonološka svesnost, ekspresivni rečnik, receptivni rečnik

Uvod

U literaturi postoje različita gledišta o tome da li se fonološki oblici reči odvojeno skladište za upotrebu u percepciji i produkciji govora (Altvater-Mackensen & Fikkert, 2010; Diehl et al., 2004; Hickok & Poeppel, 2007). Iako se percepcija i produkcija govora tradicionalno proučavaju kao zasebni fenomeni, rezultati neurobioloških studija govore u prilog njihovoj međusobnoj povezanosti (Casserly & Pisoni, 2010; Fadiga et al., 2002; Galantucci et al., 2006).

Fonološke reprezentacije sadrže informacije o fonološkim oblicima reči. Teorije o razvoju fonoloških reprezentacija naglašavaju da su deca već na uzrastu od 14 meseci osetljiva na minimalne kontraste u zadacima procene auditivne percepcije (Bailey & Plunkett, 2002; Ballem & Plunkett, 2005; Swingley, 2009; Swingley & Aslin, 2002), ali da se nagli porast postignuća na zadacima fonološke svesnosti očekuje tek u vreme intenzivnog razvoja metakognitivnih sposobnosti i/ili ovladavanja čitanjem (Ziegler & Goswami, 2005). Suprotno tradicionalnom shvatanju, savremeno gledište ističe da su fonološke reprezentacije kod dece u početku nedovoljno diferencirane i da postepeno, kako se rečnik razvija, dobijaju stabilan karakter (Fowler, 1991; Metsala & Walley, 1998).

Pod uticajem savremenog gledišta razvijen je model leksičkog restrukturiranja, koji predlaže da dečje fonološke reprezentacije u dugoročnom pamćenju u početku imaju holistički karakter, a da se tokom dužeg perioda razvoja postepeno segmentiraju najpre na slogove (npr. kiša → /ki/ - /ša/), a zatim na foneme (npr. kiša → /k/ - /i/ - /š/ - /a/). Ovaj model predviđa da će najpre biti segmentirane one reči za koje u mentalnom leksikonu već postoji mnogo fonemski sličnih reči, dok će neke reči ostati nedovoljno segmentirane sve do odraslog doba. Unutar modela leksičkog restrukturiranja stepen segmentacije fonoloških reprezentacija ograničava znanje deteta o fonološkom sistemu, koji se označava terminom fonološka svesnost (Metsala & Walley, 1998). Ovaj model implicira da su fonološke reprezentacije izgovorenih reči u dugoročnom pamćenju kod dece u početku holističke, a da sa razvojem tokom dužeg perioda postaju segmentne, omogućavajući im manipulaciju najpre slogovima, a zatim i fonemama na zadacima procene fonološke svesnosti.

Prema ovom modelu, porast broja reči u mentalnom leksikonu podstiče proces prepoznavanja izgovorenih reči, od početnih holističkih reprezentacija sve do prepoznavanja na osnovu fonemskih reprezentacija. Čitanje i pisanje nemaju posebnu ulogu u okviru ovog modela, iako Metsala i Veli (Metsala & Walley, 1998) ističu da iskustvo čitanja i pisanja može pozitivno uticati na razvoj fonoloških reprezentacija.

Sa druge strane, psiholingvistička teorija (Ziegler & Goswami, 2005) deli sa modelom leksičkog restrukturiranja ideju da razvoj rečnika podstiče

segmentaciju fonoloških reprezentacija, ali ističe da će se reči u potpunosti memorisati u obliku fonema tek kada deca ovladaju čitanjem.

Tokom poslednje dve decenije sve je veća podrška alternativnom teorijskom okviru koji obuhvata elemente obe teorije. Prema ovom gledištu, nedovoljno diferencirane grupe fonema počinju da se izdvajaju iz govornog signala već tokom ranog detinjstva, ali se izjednačavaju sa fonološkim reprezentacijama odraslih tek nakon ovladavanja čitanjem i pisanjem. Stepen do kojeg dete može pristupiti različitim nivoima ovih informacija menja se u skladu sa razvojnim nivoom i zahtevima zadatka. Različito postignuće dece na zadacima procene objašnjava se postojanjem „dinamičkih filtera”, koji moduliraju pristup fonološkim informacijama kroz tri interaktivne ravni: opšti nivo percepcije, oblik reči i fonema. Na stepen do kojeg deca pristupaju različitim nivoima informacija utiču: neke karakteristike i sklonosti dece ka određenim sadržajima (npr. stepen izloženosti određenim jedinicama maternjeg jezika), nivo razvoja i zahtevi zadatka (Werker & Curtin, 2005).

Poznata je činjenica da jedna od najistaknutijih karakteristika jezičkog razvoja dece podrazumeva nagli skok u razvoju rečnika koji počinje sa oko dve godine, dok je kontinuirana stopa povećanja obima rečnika još uvek visoka na predškolskom i ranom školskom uzrastu. Iako je učenje sa instrukcijama efikasan način za podsticanje razvoja rečnika, istraživanja pokazuju da dete na ovaj način savlada svega 10% reči (Baumann & Kame'enui, 1991), ističući da sam proces podučavanja nije dovoljan da objasni individualne razlike u razvoju rečnika među decom (Penno et al., 2002). U svetlu navedenih činjenica ističe se potreba za razmatranjem kognitivnih i jezičkih sposobnosti koje bi mogle doprineti razvoju rečnika.

Izvestan broj studija istraživao je vezu između fonoloških sposobnosti i obima rečnika dajući različite rezultate. Do danas se većina istraživanja usredsredila na rane faze razvoja (Claessen et al., 2009; Foy & Mann, 2009). Iako su Werker i saradnici (Werker et al., 2002) utvrdili statistički značajnu povezanost između obima rečnika i prepoznavanja fonoloških kontrasta kod dece uzrasta od 14 meseci, takvi rezultati nisu utvrđeni kada je isti zadatak primenjen kod dece uzrasta od 20 meseci. Neki autori tvrde da rana osetljivost na minimalne fonemske kontraste ne zahteva da se fonološke reprezentacije kod dece skladište u formi fonema (Ainsworth et al., 2016). Drugim rečima, samo zato što dete može da napravi razliku između reči „sima – zima”, to ne mora nužno značiti da će fonemu „s” u reči „sima” kategorisati kao istu fonemu u reči „pas”. Ako se fonološke reprezentacije menjaju tokom razvoja, postavlja se pitanje u kojoj je meri značajan odnos između razvoja fonoloških reprezentacija i razvoja rečnika.

Vagner i Torgesen (Wagner & Torgesen, 1987) su na osnovu istraživanja jezičkih sposobnosti kod dece školskog uzrasta identifikovali tri međusobno povezana klastera sposobnosti fonološke obrade koji se povezuju sa uspehom u

čitanju: fonološku svesnost, fonološko pamćenje i fonološki pristup mentalnom leksikonu. Fonološka svesnost odnosi se na sposobnost identifikacije ili manipulacije akustičkom strukturom govornog jezika, nezavisno od značenja, a obično se procenjuje zadacima identifikacije, zamene, eliminacije ili prebrojavanja glasova unutar reči. Fonološka memorija podrazumeva kodiranje informacija i njihovo privremeno skladištenje u akustičkom sistemu i obično se procenjuje neposrednim ponavljanjem usmeno predstavljenog materijala (brojeva ili ne-reči). Fonološki pristup mentalnom leksikonu odnosi se na brzinu i tačnost pomoću koje deca mogu da preuzmu fonološke kodove iz dugoročne memorije, a obično se procenjuje zadacima brzog automatskog imenovanja.

Istraživanje o fonološkom pristupu ne bi bilo potpuno bez povezivanja ovog procesa sa verbalnom radnom memorijom. S obzirom na to da je radna memorija sistem koji sadrži tri komponente: centralni izvršitelj, epizodički bafer i fonološku petlju (Baddeley, 2000), očekivano je da će deca sa deficitima verbalne radne memorije ispoljavati smetnje u ovladavanju novim rečima, što su potvrdili rezultati nekih istraživanja (Baddeley et al., 1998; Gathercole et al., 1991; Gathercole & Baddeley, 1993). Utvrđivanje povezanosti između verbalne radne memorije i usvajanja novih reči započeto je sa istraživanjem ponavljanja ne-reči, čiji su rezultati pokazali da ovaj zadatak predstavlja značajan indikator fonološkog pamćenja kod dece. Ovaj zadatak podrazumeva eksplicitno fonološko znanje, a ne uključuje aktivaciju leksičko-semantičkog sistema, što znači da deca moraju zadržati fonološke predstave u verbalnoj memoriji dovoljno dugo da bi uspešno obavila zadatak (Baddeley, 1986). Nakon ovoga, rezultati longitudinalne studije pokazali su da su mere receptivnog rečnika statistički značajno povezane sa skorom na zadatku ponavljanja ne-reči na uzrastu od četiri i pet godina. Takođe, utvrđeno je da ponavljanje ne-reči na uzrastu od četiri godine predstavlja značajan indikator razvoja rečnika na uzrastu od pet godina (Gathercole & Baddeley, 1989). Pored toga, teški deficiti ponavljanja ne-reči utvrđeni su i u grupi dece sa razvojnim jezičkim poremećajem koji uključuje i deficite u razvoju rečnika (Gathercole & Baddeley, 1990). Na ovaj način utvrđeno je da povezanost između verbalne radne memorije i rečnika omogućava razvoj stabilnih fonoloških predstava u dugoročnom pamćenju tokom procesa razvoja rečnika. Model leksičkog restrukturiranja koji govori o uzročnom efektu razvoja rečnika na segmentaciju fonoloških reprezentacija takođe implicira da razvoj rečnika određuje i fonološko kratkoročno pamćenje, što je potvrđeno u istraživanjima (Brown & Hulme, 1996; Snowling et al., 1991).

Iako rezultati istraživanja često pokazuju nezavisan doprinos brzine automatskog imenovanja postignuću u čitanju (Felton & Brown, 1990; Wolf et al., 1994), brojni autori ističu da ovaj zadatak, zajedno sa drugim jezičkim zadacima (npr. procena ekspresivnog rečnika), uključuje pristup fonološkim kodovima i da se u skladu sa tim može kategorisati kao deo „fonološke porodice” (Torgesen et al., 1997). S obzirom na to da ovaj zadatak procenjuje brzinu kojom

se jezičke jedinice preuzimaju iz leksičko-semantičkog sistema, zatim fonološki enkodiraju, a na kraju i izgovaraju naglas, hipoteza fonološkog deficita ističe da deficiti brzog automatskog imenovanja mogu nastati kao posledica smetnji fonološkog enkodiranja u okviru leksičkog pristupa (Bowey et al., 2005). Zadatak imenovanja vizuelno prikazanih stimulusa koji se koristi za procenu obima ekspresivnog rečnika podrazumeva aktivaciju niza zahtevnih procesa: pažnje, percepcije, memorije, leksičko-semantičke, fonološke i artikulacione procese. Zadatak brzog automatskog imenovanja podrazumeva dodatne zahteve povećane brzine i serijske obrade informacija na nivou svih navedenih procesa (Wolf et al., 2000). Savremeni modeli ističu da brzo automatsko imenovanje predstavlja važan segment sposobnosti preciznog i efikasnog skladištenja grafema, što bi značilo da ova sposobnost pruža podršku osnovnim neurološkim procesima za koje bi se moglo pretpostaviti da se podjednako primenjuju na čitanje i pravopis (Savage et al., 2008). S obzirom na to da je fonološka obrada značajna za uspeh u razvoju rečnika i sticanju čitanja i pisanja (Evans et al., 2000), za procenu navedenih sposobnosti primena zadataka brzog automatskog imenovanja može se smatrati potencijalno korisnom.

Budući da razvoj fonoloških reprezentacija počinje već na najmlađem uzrastu, kao i da traje tokom predškolskog perioda i prvog razreda, postoji potreba za istraživanjima koja će utvrditi odnose između fonoloških i drugih jezičkih procesa. U datom kontekstu od posebnog značaja je ispitivanje navedenih odnosa u predškolskom periodu, kako bismo utvrdili da li proces leksičkog restrukturiranja počinje već na tom uzrastu, odnosno u kojoj je meri nezavisan od procesa čitanja i pisanja.

Cilj istraživanja je da se utvrdi značaj fonološke svesnosti, verbalne radne memorije i brzog automatskog imenovanja kao pokazatelja razvijenosti ekspresivnog i receptivnog rečnika kod dece predškolskog uzrasta.

Metode

Uzorak

Istraživanjem je obuhvaćeno 86 dece tipičnog razvoja. Uzorak je ujednačen prema polu i uzrastu ($\chi^2 = 0.04$, $df = 1$, $p = .82$). Kriterijumi za uključivanje dece u uzorak podrazumevali su: odsustvo senzornog i/ili motoričkog poremećaja, uredan socioemocionalni razvoj, kao i najmanje normalan nivo intelektualnog funkcionisanja. Dobijeni podaci preuzeti su iz psihološko-pedagoške dokumentacije. Istraživanje je realizovano u periodu od septembra do decembra 2020. godine u okviru Predškolske ustanove „Zvezdara”. Sva deca iz uzorka su dobrovoljni učesnici u istraživanju, za koje je dobijena pisana saglasnost roditelja.

Tabela 1*Distribucija uzorka prema polu i uzrastu*

Pol	N	Uzrast u mesecima			
		Minimum	Maksimum	AS	SD
Dečaci	44	60	83	71.09	6.66
Devojčice	42	61	84	70.55	7.74
Ukupno	86	60	84	70.83	7.17

Instrumenti i procedura

Za procenu fonološke svesnosti, verbalne radne memorije, brzog automatskog imenovanja, ekspresivnog i receptivnog rečnika korišćeni su suptestovi koji predstavljaju deo baterije za procenu jezičkih sposobnosti (*Clinical Evaluation of Language Fundamentals – Fourth Edition*; Semel et al., 2003). Ova baterija nije standardizovana za srpsko govorno područje. Suptestovi za procenu jezičkih sposobnosti koji su primenjeni u istraživanju prevedeni su i adaptirani za srpsko govorno područje metodom duplog slepog prevođenja, uz poseban osvrt na vrstu, dužinu i kompleksnost reči koje su korišćene kao zamena za stimulus reči iz izvorne verzije, kako bi odgovarale zahtevima srpskog jezika.

1. Suptest Fonološke svesnosti sastoji se iz 17 zadataka sa po pet stavki, koji se deci prezentuju usmenim putem. Interna konzistentnost suptesta iznosi .93, što ukazuje na veoma dobar stepen pouzdanosti instrumenta za procenu.
2. Suptest Verbalne radne memorije procenjuje sposobnost ponavljanja brojeva unapred i unazad. Konačni rezultat testa označava se kao raspon brojeva u oba zadatka i što je veća vrednost raspona, to je veći kapacitet verbalne radne memorije. Interna konzistentnost suptesta iznosi .85, što ukazuje na veoma dobar stepen pouzdanosti instrumenta za procenu.
3. Suptest Brzog automatskog imenovanja procenjuje sposobnost imenovanja kombinacije oblika i boja u što kraćem vremenskom intervalu.
4. Suptest Klase reči procenjuje da li i na koji način deca uspostavljaju semantičke odnose među rečima, dajući kao rezultat skor receptivnog i ekspresivnog rečnika, kao i ukupan skor razvijenosti rečnika. Ovaj suptest ispituje da li deca razumeju koja su dva pojma na slici međusobno povezana, kao i da objasne smer te veze. Za potrebe istraživanja primenjen je prvi deo testa, koji se sastoji od 21 zadatka, čiji rezultat daje skor receptivnog rečnika.
5. Suptest Ekspresivnog rečnika procenjuje sposobnost imenovanja 27 vizuelno prikazanih stimulusa.

Svi zadaci deci su prezentovani individualno, u posebnoj prostoriji. Vreme testiranja jezičkih sposobnosti dece nije bilo ograničeno.

Obrada podataka

U statističkoj obradi podataka primenjene su deskriptivne mere, korelaciona analiza i hijerarhijska višestruka regresija.

Rezultati

U Tabeli 2 prikazani su rezultati korelacije nultog reda (ispod dijagonale) i parcijalne korelacije (iznad dijagonale) za sve zadatke primenjene u istraživanju.

Tabela 2

Korelaciona analiza zadataka za procenu pokazatelja ekspresivnog i receptivnog rečnika

Zadaci	1.	2.	3.	4.	5.	6.	7.	8.
1. FS		.52**	.57**	.66**	-.40**	-.14	.37*	.48**
2. BUD	.55**		.33*	.84**	-.28*	-.07	.19	.45**
3. BUZ	.56**	.38**		.78**	-.33**	-.05	.45**	.44**
4. BUK	.67**	.84**	.81**		-.37**	-.08	.38**	.55**
5. BIV	-.49**	-.34**	-.43**	-.46**		.09	-.42**	.52**
6. BIG	-.19	-.10	-.11	-.12	.16		.00	-.04
7. RR	.46**	.25**	.47**	.43**	-.46**	-.03		.47**
8. ER	.56**	.49**	.46**	.57**	-.52**	-.09	.52**	

Napomena: FS – ukupan skor na zadacima za procenu fonološke svesnosti, BUD – ponavljanje brojeva unapred, BUZ – ponavljanje brojeva unazad, BUK – ukupan skor na testu ponavljanja brojeva, BIV – vreme potrebno za zadatak brzog automatskog imenovanja, BIG – broj grešaka na zadatku brzog automatskog imenovanja, RR – skor na testu receptivnog rečnika, ER – skor na testu ekspresivnog rečnika, * $p < .05$, ** $p < .01$

Dobijeni rezultati pokazuju da su korelacije nultog reda i parcijalne korelacije (uz kontrolisanje činilaca uzrasta i pola) između obima receptivnog i ekspresivnog rečnika mera fonološke svesnosti i verbalne radne memorije statistički značajno pozitivne na svim primenjenim zadacima ($ps < .01$). Sa druge strane, utvrđena je statistički značajna negativna povezanost između obima receptivnog i ekspresivnog rečnika i vremena koje je potrebno za izvođenje zadatka brzog automatskog imenovanja ($ps < .01$) (detaljnije u Tabeli 2).

U Tabeli 3 prikazani su rezultati odnosa ekspresivnog i receptivnog rečnika sa različitim pokazateljima postignuća.

Tabela 3

Odnos ekspresivnog i receptivnog rečnika sa različitim pokazateljima postignuća

Prediktori – Model 1	Ekspresivni rečnik			Receptivni rečnik		
	<i>R</i>	<i>R</i> ²	<i>p</i>	<i>R</i>	<i>R</i> ²	<i>p</i>
	.64	.41	< .001	.51	.30	< .001
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Uzrast	.07	0.60	.54	.08	0.63	.52
Slogovna svesnost, segmentacija rečenica i rima	.39	3.45	< .001	.21	1.65	.10
Identifikacija fonema u rečima	-.43	-2.29	.02	-.33	-1.59	.11
Analiza i sinteza fonema	.41	2.31	.02	.48	2.40	.01
Eliminacija slogova i fonema u rečima	-.03	-0.02	.98	.06	0.40	.68
Supstitucija fonema u rečima	.32	2.38	.02	.07	0.51	.61
	<i>R</i>	<i>R</i> ²	<i>p</i>	<i>R</i>	<i>R</i> ²	<i>p</i>
Prediktori – Model 2	.68	.47	< .001	.57	.33	< .001
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Uzrast	.09	0.90	.37	.11	0.91	.36
Slogovna svesnost, segmentacija rečenica i rima	.24	1.94	.05	.13	0.93	.35
Identifikacija fonema u rečima	-.38	-2.20	.03	-.41	-2.02	.04
Analiza i sinteza fonema	.37	2.19	.03	.47	2.45	.01
Eliminacija slogova i fonema u rečima	-.05	-0.36	.71	.01	0.10	.91
Supstitucija fonema u rečima	.28	2.17	.03	.08	0.53	.59
Ponavlanje brojeva unapred	.18	1.72	.08	-.05	-0.48	.63
Ponavlanje brojeva unazad	.23	2.06	.04	.34	2.96	< .001
	<i>R</i>	<i>R</i> ²	<i>p</i>	<i>R</i>	<i>R</i> ²	<i>p</i>
Prediktori – Model 3	0.71	0.51	< .001	0.61	0.38	< .001
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Uzrast	.06	0.61	.54	.64	0.52	.08
Slogovna svesnost, segmentacija rečenica i rima	.20	1.67	.09	.08	0.59	.55
Identifikacija fonema u rečima	-.38	-2.13	.03	-.35	-1.75	.08
Analiza i sinteza fonema	.33	1.99	.05	.44	2.32	.02
Eliminacija slogova i fonema u rečima	-.12	-0.84	.40	-.02	-0.16	.87
Supstitucija fonema u rečima	.28	2.22	.02	.07	0.52	.60
Ponavlanje brojeva unapred	.17	1.66	.09	-.06	-0.59	.55
Ponavlanje brojeva unazad	.15	1.46	.14	.29	2.50	.01
Vreme potrebno za zadatak brzog automatskog imenovanja	-.24	-2.53	.01	-.25	-2.29	.02
Broj grešaka na zadatku brzog automatskog imenovanja	.01	0.19	.84	.08	0.85	.39

Kako bi se detaljno analizirao uticaj fonološke svesnosti, verbalne radne memorije i brzog automatskog imenovanja u razvijenosti ekspresivnog i receptivnog rečnika, formirana su tri modela pokazatelja. Analizom rezultata iz prvog modela utvrđeno je da uzrast i fonološka svesnost predviđaju 41% varijanse postignuća na zadacima procene ekspresivnog rečnika ($F = 11.17$, $df1 = 5$, $df2 = 80$, $p < .001$) i 30% varijanse postignuća na zadacima procene receptivnog rečnika ($F = 5.49$, $df1 = 5$, $df2 = 80$, $p < .001$). U datom modelu kao statistički značajni pokazatelji ekspresivnog rečnika ističu se slogovna svesnost, segmentacija rečenica i rima ($\beta = .39$), analiza i sinteza fonema ($\beta = .41$), identifikacija fonema ($\beta = -.43$) i supstitucija fonema ($\beta = .32$) ($ps < .05$). Sa druge strane, analiza i sinteza fonema predstavljaju jedini statistički značajan pokazatelj receptivnog rečnika ($\beta = .48$) u prvom modelu prediktora. Kada se ukloni uticaj fonološke svesnosti, uzrastom se objašnjava 10.6% varijanse postignuća na zadacima ekspresivnog rečnika i 8.7% varijanse postignuća na zadacima receptivnog rečnika, što predstavlja statistički značajan doprinos ($p < .001$).

U okviru drugog modela verbalna radna memorija zajedno sa fonološkom svesnošću i uzrastom predviđa 46% varijanse postignuća na zadacima procene ekspresivnog rečnika ($F = 8.38$, $df1 = 3$, $df2 = 77$, $p < .001$) i 33% varijanse postignuća na zadacima procene receptivnog rečnika ($F = 4.88$, $df1 = 3$, $df2 = 77$, $p < .001$), pri čemu se ponavljanje brojeva unazad ističe kao statistički značajan pokazatelj u oba zadatka ($ps < .05$). Kada se u drugom modelu ukloni uticaj uzrasta i fonološke svesnosti, zadaci za procenu verbalne radne memorije objašnjavaju 5.2% varijanse postignuća na zadacima ekspresivnog rečnika ($p = .02$) i 7.7% varijanse postignuća na zadacima receptivnog rečnika, što je statistički značajan doprinos ($p = .01$).

Treći i poslednji model, koji objedinjuje uzrast, fonološku svesnost, verbalnu radnu memoriju i brzo automatsko imenovanje, predviđa 51% varijanse postignuća na zadacima procene ekspresivnog rečnika ($F = 7.73$, $df1 = 2$, $df2 = 75$, $p < .001$) i 38% varijanse postignuća na zadacima procene receptivnog rečnika ($F = 4.65$, $df1 = 2$, $df2 = 75$, $p < .001$). U poslednjem modelu kao statistički značajni pokazatelji ekspresivnog rečnika ističu se zadaci identifikacije fonema ($\beta = -.38$), supstitucije fonema ($\beta = .28$), analiza i sinteza fonema ($\beta = .33$), ponavljanje brojeva unazad ($\beta = .15$), kao i vreme na zadatku brzog automatskog imenovanja ($\beta = -.24$) ($ps < .05$). Sa druge strane, analiza i sinteza glasova ($\beta = .44$), ponavljanje brojeva unazad ($\beta = .29$) i vreme na zadatku brzog automatskog imenovanja ($\beta = -.25$) predstavljaju statistički značajne pokazatelje receptivnog rečnika u trećem modelu prediktora. Nakon uklanjanja uticaja uzrasta, fonološke svesnosti i verbalne radne memorije, brzo automatsko imenovanje objašnjava 4.2% varijanse postignuća na zadacima ekspresivnog rečnika, što je statistički značajan doprinos ($p = .04$).

Diskusija

Analizom rezultata istraživanja utvrđeno je da model koji čine uzrast, fonološka svesnost, verbalna radna memorija i brzo automatsko imenovanje objašnjava statistički značajan udeo varijanse postignuća na zadacima ekspresivnog i receptivnog rečnika.

Ispitujući pojedinačan doprinos navedenih procesa u razvoju rečnika utvrđeno je da pod kontrolom uzrasta četiri od pet mera fonološke svesnosti predstavljaju statistički značajne pokazatelje razvijenosti ekspresivnog rečnika, dok jedna od pet mera fonološke svesnosti predstavlja statistički značajan pokazatelj razvijenosti receptivnog rečnika, što je u skladu sa nalazima drugih istraživanja u ovoj oblasti (Ainsworth et al., 2016; McDowell et al., 2007; Metsala, 1999). Rezultati našeg istraživanja potvrđuju nalaze drugih autora koji su se bavili istraživanjem odnosa fonološke obrade i ekspresivnog rečnika, a čiji rezultati ukazuju na statistički značajnu povezanost između navedenih procesa kod dece predškolskog uzrasta (Anthony et al., 2006; Aslin & Smith, 1988; Burgess & Lonigan, 1998; Cooper et al., 2002; Elbro et al., 1998; Garlock et al., 2001; Gibbs, 2004; Goodrich & Lonigan, 2015; Lonigan et al., 2009; Stadler et al., 2007; Storch & Whitehurst, 2002; Wagner et al., 1993).

Dobijeni rezultati pružaju podršku modelu leksičkog restrukturiranja (Metsala & Walley, 1998). Kako se rečnik razvija, deca dodaju sve više fonoloških detalja leksičkim reprezentacijama, što im omogućava da prave razlike između sve brojnijih fonološki sličnih zapisa u leksikonu (Aslin & Smith, 1988). U jednom od istraživanja autori su utvrdili da je ekspresivni rečnik statistički značajno povezan sa postignućem dece na zadatku eliminacije fonema, što je u skladu sa našim rezultatima (McBride-Chang et al., 1997). U svojoj longitudinalnoj studiji Lezeman i de Jong (Leseman & de Jong, 1998) utvrdili su da je obim rečnika kod četvorogodišnjaka najsnažniji pokazatelj dekodiranja reči.

Postignuća na zadacima receptivnog rečnika zahtevaju da deca prepoznaju govor i usklade auditivnu informaciju sa fonološkim reprezentacijama u mentalnom leksikonu. Dakle, zadaci receptivnog rečnika ne procenjuju samo semantičko znanje već i sposobnost percepcije govora i kvalitet fonoloških reprezentacija (Beatie & Manis, 2014). Naši rezultati su u skladu sa prethodnim studijama koje su utvrdile statistički značajnu povezanost između receptivnog rečnika i fonološke svesnosti kod dece, ističući da receptivni rečnik odražava razvijenost osnovnih fonoloških reprezentacija (Carroll et al., 2003; Sénéchal et al., 2006; Silvén et al., 2002; Wise et al., 2007).

Kako deca stiču više iskustva sa rečima, ona sve uspešnije razlikuju fonemski slične reči. Razlikovanje ovih reči zahteva razvijenu svest o fonologiji (Anglin, 1989), stoga proizilazi da su receptivni rečnik i fonološka svesnost snažno povezani. Na osnovu naših rezultata i prethodnih studija možemo zaključiti da fonološka svesnost podstiče sposobnost percepcije govora potrebne

za razvoj rečnika. Metsala (Metsala, 1999) je u svom istraživanju utvrdila snažne pozitivne korelacije između obima receptivnog rečnika i zadataka fonološke svesnosti koji uključuju segmentiranje reči i ne-reči na uzorku dece uzrasta od četiri, pet i šest godina. Slični rezultati dobijeni su i u drugom istraživanju, gde su primenjene različite mere procene fonološke svesnosti i fonološke kratkoročne memorije na uzorku od 200 petogodišnje dece. Rezultati su pokazali snažnu povezanost obe mere fonoloških sposobnosti sa receptivnim rečnikom (Bowey, 1996). Sa druge strane, neka istraživanja pokazuju da je receptivni rečnik statistički značajan pokazatelj čitanja reči, ali ne i fonološke svesnosti (Elbro et al., 1998; Garlock et al., 2001). Analizom rezultata našeg, ali i drugih istraživanja, nameće se pretpostavka da fonološka svesnost kao statistički značajan pokazatelj ipak uspešnije objašnjava varijacije u postignuću na zadacima ekspresivnog rečnika u odnosu na receptivni rečnik.

Rezultati procene odnosa između fonološke obrade i rečnika u našem istraživanju potvrđuju činjenicu da su specifični aspekti jezičke strukture snažno povezani sa fonološkom svesnošću kod predškolske dece. Jedno od mogućih objašnjenja ove veze je uloga razvoja rečnika u postavljanju temelja za razvoj fonološke svesnosti. Prema modelu leksičkog restrukturiranja, kako deca razvijaju rečnik, leksikon je predstavljen „segmentnije”, omogućavajući pristup slogovima i fonemama kao delovima reči koje zahtevaju zadaci fonološke svesnosti. Na ovaj način povezanost između ekspresivnog i receptivnog rečnika i mera fonološke svesnosti predstavlja očekivan rezultat.

Zajedničko za rezultate svih prikazanih istraživanja je da je fonološka svesnost objasnila jedinstven udeo varijacija u obimu rečnika na predškolskom uzrastu, ukazujući da je razvoj fonološke svesnosti vezan za osnovno leksičko znanje. Sposobnost opažanja fonemskih segmenata u rečima mogla bi biti posebno korisna u uslovima gde je prepoznavanje izgovorene reči teško. Shodno tome, razlog da se pretpostavi veza između fonološke osetljivosti i razvijenosti rečnika je što povećana osetljivost na foneme može omogućiti adekvatne fonološke reprezentacije nepoznatih reči. Bolja početna fonemska segmentacija rezultiraće sticanjem novih reči u mentalnom leksikonu.

Činjenica da fonološka svesnost pod kontrolom uzrasta objašnjava statistički značajan udeo varijanse u postignuću na zadacima procene razvijenosti rečnika tokom predškolskog uzrasta, dakle nezavisno od čitanja sugerise da neke jezičke varijable mogu posredno uticati na razvoj i sticanje čitanja svojom povezanošću sa fonološkom svesnošću. Dobijeni rezultati podržavaju opšti zaključak da se rečnik i fonološka svesnost razvijaju recipročno. Ovaj odnos je posebno značajan u našem uzorku dece, koja još uvek nisu započela sa obukom čitanja. Navedeno tumačenje može nam pomoći u objašnjenju donekle kontradiktornih nalaza istraživanja na osnovu kojih se tumače bolja ili lošija postignuća dece u čitanju (npr. Bryant et al., 1990; Roth & Spekman, 1986). U skladu sa ovim činjenicama, pretpostavljamo da će se razumevanje pokazatelja

čitanja poboljšati ispitivanjem razvoja leksičke obrade i fonoloških procesa povezanih sa čitanjem.

Postoji nekoliko razloga za povezanost između fonološke obrade i rečnika. Kao što ističu Metsala i Veli (Metsala & Walley, 1998), stepen segmentacije fonoloških reprezentacija može se zamisliti kao kontinuum, od nesegmentiranih reprezentacija na jednom kraju do fonemskih reprezentacija na drugom. U skladu sa tim, individualne razlike u osetljivosti na foneme i fonološke kratkoročne memorije zavise od stabilnosti postojećih fonoloških reprezentacija, odnosno stepena do kojeg su u datom trenutku razvoja segmentirane (Fowler, 1991).

Rezultati istraživanja pokazuju da zadaci za procenu verbalne radne memorije predstavljaju statistički značajne pokazatelje razvijenosti ekspresivnog i receptivnog rečnika, nezavisno od uticaja fonološke svesnosti i uzrasta dece. Naši rezultati su u skladu sa nalazima longitudinalne studije dece tipičnog razvoja predškolskog uzrasta, čiji rezultati pokazuju da ponavljanje ne-reči kao zadatak za procenu verbalne radne memorije ima značajnu ulogu u razvijenosti ekspresivnog rečnika (Gathercole & Baddeley, 1989). Pored toga, rezultati istraživanja u ovoj oblasti pokazuju da verbalna radna memorija, merena zadacima ponavljanja ne-reči i brojeva, predstavlja statistički značajan pokazatelj razvijenosti ekspresivnog rečnika, za razliku od neverbalne inteligencije i svesnosti o rimu, što je u skladu sa našim rezultatima (Gathercole et al., 1991). Značaj verbalne radne memorije kao pokazatelja razvijenosti rečnika istaknut je i u studijama drugih autora (Michas & Henry, 1994; Snowling et al., 1991).

U početnim fazama razvoja rečnika, nakon izlaganja stimulus rečima, dete neposredno ponavlja nizove fonema od kojih se data reč sastoji. Na taj način zadaci ponavljanja nizova fonema ili brojeva u odgovarajućem redosledu omogućavaju procenu u kom opsegu dete zadržava verbalni materijal u okviru fonološke petlje radne memorije. U skladu sa ovim objašnjenjem nije iznenađujuća činjenica da navedeni zadaci za procenu verbalne radne memorije predstavljaju značajan pokazatelj razvijenosti rečnika. Rezultati našeg istraživanja specifičnih odnosa između ovih procesa podržavaju nalaze koji ukazuju na značaj fonološkog kratkoročnog pamćenja u dugoročnom skladištenju informacija koje su uključene u razvoj rečnika. Ukoliko dete ispoljava smetnje da zadrži zvuk nove reči nekoliko sekundi, čini se verovatnim da će kasnije imati smetnje sa preuzimanjem iste sekvence fonema iz dugoročnog pamćenja (Gathercole et al., 1991; Taylor et al., 1989). Efikasno fonološko pamćenje omogućilo bi deci da zadrže tačan prikaz fonema u rečima i usmere više kognitivnih resursa u razumevanje značenja reči. Rezultati navedenih istraživanja zajedno daju podršku hipotezi da su odgovarajuće sposobnosti verbalne radne memorije preduslov za normalan razvoj rečnika. Nepotpune fonološke reprezentacije otežavaju zadržavanje jezičkih informacija

u fonološkoj kratkoročnoj memoriji i na taj način ograničavaju sposobnost dece da steknu znanje o rečima (Levelt et al., 1999).

Odnos verbalne radne memorije i rečnika može biti i recipročan sa kapacitetom verbalne radne memorije koji ograničava savladavanje novih reči na mlađem uzrastu, ali i opsegom rečnika koji smanjuje zahteve za verbalnu radnu memoriju sa razvojem pamćenja kod dece. Poznata je činjenica da se sposobnosti fonološke kratkoročne memorije značajno menjaju između četvrte godine i adolescencije (Hulme et al., 1984). Na taj način postignuća verbalne radne memorije su na starijem uzrastu sve više posredovana upotrebom analogija sa postojećim rečnikom kod dece, što vodi do toga da verbalna radna memorija više ne predstavlja glavni pokazatelj razvoja rečnika (Gathercole et al., 1992).

Dobijeni rezultati pokazali su da uzrast, fonološka svesnost, verbalna radna memorija i brzo automatsko imenovanje daju nezavisan doprinos razvoju ekspresivnog rečnika kod dece pre formalne obuke čitanja. Brzo automatsko imenovanje predstavlja meru efikasnosti u preuzimanju fonoloških kodova iz dugoročne memorije (Wagner et al., 1993). Konceptualizacija odnosa između brzog automatskog imenovanja i jezičkih sposobnosti fokusirana je na međusobnu zavisnost ovih procesa od efikasnosti kontinuuma kognitivnih, vizuelnih i jezičkih procesa, kao i brzine njihove integracije (Wolf, 1991). Prema ovom gledištu, postignuća na zadacima brzog automatskog imenovanja i jezičkih sposobnosti u različitom stepenu zavise od brzine procesa koji se kreće od percepcije do artikulacije, uključujući i fonološko kodiranje. Uzimajući u obzir navedene činjenice, brzinu imenovanja trebalo bi konceptualizirati prema njenom primarnom naglasku na brzini obrade (Bowers, 1995).

Sa zahtevom za brzi prelazak sa jednog na drugi stimulus, zadatak brzog automatskog imenovanja zahtevniji je u odnosu na zadatak imenovanja vizuelnih stimulusa prilikom procene ekspresivnog rečnika. U slučaju brzog automatskog imenovanja procesi kao što su vizuelno pretraživanje i inhibicija moraju se brzo integrisati sa vizuelnom identifikacijom, leksičkim pronalaženjem i sposobnošću artikulacije. Kao posledica povećanih zahteva za vremenskim usaglašavanjem procesa koji se nalaze u osnovi jezičkih sposobnosti, brzo automatsko imenovanje može predstavljati osetljivu meru mogućih oblasti jezičke disfunkcije. Na ovaj način deficiti brzog automatskog imenovanja mogu posledično uticati na usporenu aktivaciju nižih procesa koji su uključeni u jezičku obradu informacija.

Zaključak

Poslednjih decenija istraživanja nivoa jezičkih i kognitivnih sposobnosti koje doprinose uspešnom razvoju jezika značajno su unapredila naše razumevanje prirode jezičkog razvoja, kao i jezičkih i kognitivnih osnova individualnih razlika među decom.

Rezultati istraživanja pokazali su da je fonološka obrada kod dece statistički značajno povezana sa njihovim leksičkim znanjem pre ovladavanja čitanjem. Dobijeni rezultati su u skladu sa modelom leksičkog restrukturiranja, prema kojem razvoj rečnika podstiče proces prepoznavanja izgovorenih reči na nivou segmenata.

Iako rezultati ovog istraživanja jasno ukazuju na to da fonološka svesnost može poboljšati razvoj rečnika, treba napomenuti da se sa aspekta daljeg razvoja jezika „prirodni razvoj rečnika” i dalje posmatra kao glavna odrednica restrukturiranja postojećih fonoloških reprezentacija.

Ograničenja našeg istraživanja odnose se na činjenicu da su podaci o sposobnostima fonološke obrade dobijeni u okviru studije preseka. Prema mišljenju autora, potrebno je sprovesti longitudinalno istraživanje koje bi omogućilo razumevanje uzročno-posledičnih odnosa između razvoja rečnika i fonološke obrade, odnosno kako varijacije u razvoju rečnika doprinose postignuću u prepoznavanju izgovorenih reči i svesnosti o fonemama. Pored toga, u narednim istraživanjima potencijalno bi bilo značajno utvrditi da li tretman usmeren na neki od strukturalnih nivoa jezika dovodi do poboljšanja postignuća na zadacima fonološke obrade, do granica postojećeg kapaciteta deteta.

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Phonological awareness, verbal working memory and rapid automatic naming as indicators of vocabulary development in preschool children

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Introduction. According to the lexical restructuring model, the development of vocabulary initiates the development of phonological representations. Therefore, it can be predicted that children with developed vocabulary will possess very specific phonological representations of words. *Aim.* The aim of this research was to determine the significance of phonological awareness, verbal working memory, and rapid automatic naming as indicators of the development of expressive and receptive vocabulary in preschool children. *Method.* The research included 86 children of typical development. For the assessment of phonological awareness, verbal working memory, rapid automatic naming, expressive and receptive vocabulary, the subtests of Clinical Evaluation of Language Fundamentals – Fourth Edition battery were used. *Results.* The results showed that the model containing age, phonological awareness, verbal working memory, and rapid automatic naming predicted 51% of the achievement variance on expressive vocabulary tasks ($F = 7.73$, $df1 = 2$, $df2 = 75$, $p < .001$) and 38% of the achievement variance on receptive vocabulary tasks ($F = 4.65$, $df1 = 2$, $df2 = 75$, $p < .001$). In the final model, only the tasks of phoneme identification, phoneme substitution, and rapid automatic naming ($p < .05$) stood out as statistically significant indicators of expressive vocabulary. On the other hand, statistically significant indicators of receptive vocabulary included analysis and synthesis of phonemes, verbal working memory, and rapid automatic naming ($p < .05$). *Conclusion.* The results showed that age, phonological awareness, verbal working memory, and rapid automatic naming significantly contributed to vocabulary development in children before reading acquisition.

Keywords: phonological awareness, expressive vocabulary, receptive vocabulary

PRIMLJENO: 12.10.2021.

REVIDIRANO: 05.12.2021.

PRIHVAĆENO: 07.12.2021.



Fenomen znakovane muzike u kulturi Gluvih

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Uvod. Muzika u zajednici Gluvih je sociokulturni fenomen koji oslikava specifičan identitet i način doživljavanja sveta, koji je jednako raznovrstan, bogat i sadržajan kao i kod pripadnika bilo koje druge kulture. *Cilj.* Cilj ovog rada je da ukaže na istorijske i sociokulturne okvire, složenost, bogatstvo, specifične elemente, vrste i oblike muzičkog izražavanja pripadnika zajednice Gluvih. *Metode.* Primenjene metode su uporedna analiza, evaluacija i sistem dedukcije i indukcije. *Rezultati.* Zbog ograničenja ili nedostatka auditivne komponente pripadnici kulture Gluvih koriste različite komunikacione alate, poput govora, pantomime, izraza lica i znakovnog jezika. Znakovana muzika kao fenomen je umetnička forma koja nema dugu istoriju, ali od devedesetih godina prošlog veka i sa tehnološkim razvojem zadobija sve veće interesovanje i priznanje u zajednici Gluvih i među „slušateljima”. Znakovana muzika koristi specifične vizuo-prostorno-kinestetičke i auditivne elemente u izražavanju, poput ritma, dinamike, rime, izražajnosti, ikoničnosti, intenziteta muzičke percepcije i kombinacije uloge izvođača. *Zaključak.* Znakovana muzika kao fenomen je umetnička forma koja inkorporira znakovane poetske karakteristike (lirske sadržaje), vizuelne muzičke elemente i ples.

Cljučne reči: fenomen, znakovana muzika, kultura Gluvih

Uvod

Muzika kao kategorija umetnosti može se sagledati iz više uglova. Prvo, muzika je produkt muzičkog znanja, veštine, inventivnosti, kreativnosti i lucidnosti kompozitora koji stvara umetničko delo ili kompoziciju. Drugo, muzika je auditivni doživljaj koji se ogleda u interpretaciji kompozicije putem

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Napomene: 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.

Rad je delimično izložen na *11. Međunarodnom skupu „Specijalna edukacija i rehabilitacija danas”*, Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, 2021.

ljudskog glasa ili muzičkog instrumenta. I na kraju, muzika stalno evoluirala, te na njenu produkciju i percepciju utiču istorijski, sociokulturni i mnogi drugi faktori.

Muzika je neiscrpan izvor stvaralaštva i promišljanja, koji implicira brojna filozofska, matematička, akustička, socijalna, etnološka, pedagoška, vizuelna i mnoga druga svojstva. Kompleksnost njene poruke, način izražavanja i uticaj na čoveka je večita tema mnogih naučnih disciplina još od Pitagorine teorije *Muzika sfera* do savremenih proučavalaca i stvaralaca muzike.

Pitagora kontemplira odnos pravilno poredanih brojeva i harmoniju sfera koje, po njegovom mišljenju, ukazuju na strukturne relacije planeta u kosmosu. Relacije planetarnih sfera i zvezda u kosmosu produkuju zvukove koji čine harmoničnu kosmičku oktavu poznatu kao muzika sfera, toliko suptilnu i gracioznu da je naš auditivni sistem ne može percipirati (infra i ultrazvuk čine frekvencije koje ljudsko uvo ne može da registruje, ali to ne znači da ih čovek ne percipira na nekom drugom nivou). Kasnije su Pitagorine pristalice ovu vrstu muzike nazvali *musica mundane* ili *musica universalis*. Pored ove vrste muzike, oni identifikuju *musica humana* i *musica instrumentalis*. *Musica humana* je produkt harmonije u mikrokosmosu, u ljudskom biću, u božanskoj proporciji ljudskog tela i harmoniji funkcionisanja organizma na mentalnom, duhovnom i fiziološkom nivou. *Musica instrumentalis* je koncept muzike koji se odnosi na vokalnu, instrumentalnu ili kombinovanu manifestaciju zvuka. Harmonična kosmička muzika egzistira svuda i upravlja svim ritmovima prirode, kako u makro, tako i u mikrokosmosu. Čitav spektar frekvencija zvuka kroz multisenzorni sistem dotiče ljudsku dušu, povezuje kosmos, božansko biće i svet ideja, te inicira konverzaciju u međusobnim interakcijama (Boethius, 1867; Pliny the Elder, 1938 sve prema Cripps et al., in press; Canadian Cultural Society of the Deaf, 2015).

Iako većina ljudi primarno percipira muziku kao auditivnu senzaciju, Pitagorina teorija i niz savremenih muzičkih vidova stvaranja i interpretacija ukazuju da je ona i multisenzorni konstrukt – auditivna, vizuelna, proprioceptivna i taktilna manifestacija – koji se pojavljuje u različitim multimedijalnim formama (npr. performansi, opera, balet, muzički spotovi, mjuzikl itd.). Istorijski okviri razvoja ljudske civilizacije idu u prilog ovoj tezi jer ukazuju da je primarni oblik izražavanja čoveka bio na auditivno-taktilnom nivou, tj. na nivou razvoja govora. Gluve osobe i danas razvijaju govorne sposobnosti na ovim osnovama. Oslanjajući se na ostatke sluha, vid, vibracije i taktilnu percepciju govornog aparata, oni uče da prepoznaju i reprodukuju samoglasnike i suglasnike, reči i rečenice. Sledeći nivo razvoja ljudske civilizacije oslanja se na vizuelnu percepciju (razvoj štampe, fotografije) koja je svojstvena gluvim osobama. Treći nivo, kao rezultat razvoja visoke tehnologije, jeste razvoj elektronskih medija (McLuhan, 2001), kada su zvuk, tekst i pokret inkorporirani u svojevrсни multimedijum koji od savremenih muzičkih stvaralaca i izvođača iziskuje nove izazove i adaptaciju (Isaković, 2013; Marijan, 2019).

Sociokulturni i lingvistički kontekst muzičkog izražavanja Gluvih

Muzika u zajednici Gluvih¹ je sociokulturni fenomen koja oslikava specifičan identitet i način doživljavanja sveta, koji je jednako raznovrstan, bogat i sadržajan kao i kod pripadnika bilo koje druge kulture. Pripadnici kulture Gluvih ponosno čuvaju svoj jezik (znakovni jezik), dele iste vrednosti, tradiciju, pravila ponašanja, istorijska iskustva, zajedničke institucije, razvijaju humor i specifične umetničke izraze (sve vrste likovne umetnosti, književnost, poeziju na znakovnom jeziku, pozorište, pantomimu, znakovanu muziku itd.). Oni ističu da se ni po čemu ne razlikuju od tipične populacije, osim što im nedostaje, manje ili više, auditivna komponenta, koju dopunjuju drugim senzornim inputima. Usled ograničenja ili nedostatka auditivne komponente pripadnici kulture Gluvih koriste različite komunikacione alate: govor, pantomimu, facijalnu ekspresiju i znakovni jezik.

Iako ne dele zajedničku teritoriju, prepreke u komunikaciji među Gluvima iz različitih država nisu toliko velike kao među pripadnicima tipične populacije sa različitih geografskih područja. Razlike u autohtonim znakovnim jezicima koje koriste pripadnici zajednice Gluvih različitih govornih područja se relativno lako prevazilaze. Sledeća kohezivna komponenta koja doprinosi razvoju kulturnog identiteta su i slična iskustva koja Gluve osobe doživljavaju širom sveta, poznata kao audizam. U tom smislu pripadnici kulture Gluvih imaju osećanje bliskosti sa drugim Gluvim osobama na čitavoj planeti (Radić Šestić, et. al., 2012; Radić Šestić i sar., 2015, 2020).

Na osnovu lingvističkih istraživanja utvrđeno je da znakovni jezici, kao i bilo koji govorni jezik, dele ista lingvistička obeležja: fonologiju, morfologiju, sintaksu, semantiku i pragmatiku (Akmajian et al., 2010; Radić Šestić i sar., 2020). Znakovni jezik se zasniva na vizio-spacijalno-kinestetičkoj manifestaciji u kojoj, pored vizuelne prezentacije, položaj, pokret i smer ruku u odnosu na telo u prostoru nosi semantičke, gramatičke i pragmatične informacije. Zajedno sa govorom tela, facijalnom ekspresijom i pokretom usana produkuje se jezik kojim se ostvaruje komunikacija, lirsko (znakovana poezija, znakovana muzika) i nelirsko stvaralaštvo (znakovi i gestovi koji dopunjavaju znakovnu komunikaciju).

Cilj ovog rada je da, pored sociokulturnih i lingvističkih, ukaže i na istorijske okvire, složenost, bogatstvo, specifične elemente, vrste i oblike muzičkog izražavanja pripadnika zajednice gluvih.

Retrospektiva interesovanja Gluvih za muziku

Retrospektiva dostupnih podataka ukazuje da se još od polovine 19. veka gluve i nagluve osobe izlažu podučavanju i blagodatima muzike u okvirima koji su im bili dostupni. Turner (Turner, 1849, prema Summers, 2012) navodi

1 Pripadnici zajednice Gluvih, koji sebe vide kao zasebnu kulturu, uvek naglašavaju veliko slovo G jer ono isključuje gluvoću kao patologiju ili ometenost.

primer gluve Auguste Averu koja je uspela da nauči da svira klavir. Iako su sluh i ruka neophodna spona da se produkuje muzika korigovanjem grešaka i nesavršenosti, takođe i vid, proprioceptivni sistem i vibracije doprinose istoj funkciji. U *Istoriji američkih škola za gluve 1817–1893* kroz fotografije i tekstovne sadržaje potvrđena su interesovanja gluvih za muziku (Summers, 2012). Stavljanjem ruke na poklopac klavira da bi se osetile vibracije, gluva deca vremenom nauče da prepoznaju različite kvalitete muzike: dinamiku sviranja (piano i forte), niske i visoke tonove, koliko akorda izvodi nastavnik muzičkog itd. (Burns, 1965, prema Summers, 2012).

Početkom 20. veka, u eri nemih filmova, nastao je prvi snimak u kojem Gluva osoba izvodi znakovanu pesmu. Naime, na univerzitetu Galadet (Gallaudet University) Gluva žena prevodila je himnu SAD na znakovni jezik tako što je proizvodila znakove i pokrete koji pored lirskog sadržaja impliciraju i muzičke elemente (ritam, dinamičnost, intenzitet, ekspresivnost...). Ovaj snimak iz 1902. godine imao je i ima višestruki značaj za zajednicu Gluvih. Prvo, u periodu kada još nisu postojala slušna pomagala, njima je prvi put u istoriji preveden neki lirski i muzički sadržaj na jezik koji razumeju, približno im je nešto što je za tipičnu populaciju uobičajeno i svakodnevno (Cripps et al., 2019). Drugo, zajednica Gluvih time stiče osećaj da postaje deo socijalnog miljea u kome egzistira, vidljivija je i prisutnija u svetu čujućih. Treće, razvija se osećaj ponosa na sopstveni jezik i kulturu koju permanentno čuvaju.

U periodu od 1925. do 1940. godine najznačajnije ime za kulturu i muziku Gluvih je Čarls Krauel (Charles Krauel). On je više od 20 godina uporno snimao i dokumentovao živote Gluvih u svim aspektima, školske događaje, različite proslave i okupljanja, komunikaciju na znakovnom jeziku, umetničke predstave, muzičke performanse, te time razbijao mit o Gluvim osobama i njihovim „nesrećnim” i „ograničenim” životima. U njegovim dokumentarnim filmovima mogu se videti brojni snimci Gluvih kako izvode muzičke performanse znakovanjem u ritmu 1-2-3, 1-2-3... ili 1-2, 1-2... Snimanjem spontanih okupljanja i drugih događaja sačuvao je deo istorije za buduće generacije zajednice Gluvih i omogućio naučnicima da ispituju kako i zašto se znakovni jezik menja, kao i da proučavaju literarne i muzičke forme koje su se tada koristile (Cripps, 2018; Supalla, 1994).

Šezdesetih godina prošlog veka Narodno pozorište Gluvih (National Theater of the Deaf – NTD) predstavilo je performans pod nazivom „Moje treće oko” (My Third Eye) namenjen širem auditorijumu, jer je obrađivao teme namenjene i tipičnoj i gluvoj populaciji. Pored glumačke i literarne komponente, performans se sastojao iz dve pesme – „Spasavanje na moru” (Rescue at Sea) i „Tri slepa miša” (The Three Blind Mice). Lepota znakovane muzike bila je vidljiva u kreativnoj igri reči (znakova), ritmičkom ponavljanju pokreta šake, ruku, delova tela, čitavog tela, u facijalnim ekspresijama, razigranosti izvođača, vizuelnom ritmu koji produkuje osećaj „zvuka” i bogatstvo emocija (Baldwin,

1993). Performans „Moje treće oko” zadire duboko u živote Gluvih osoba i šalje snažne poruke da su svesni da ih tipična populacija percipira kao manje vredne članove društva, ali da i oni, na svoj način i iz svog ugla, sagledavaju tipičan svet koji ih okružuje. U nekoliko scena poruke koju šalju članovi ansambla impliciraju da funkcionisanje sluha može imati i neprijatne posledice. U jednoj sceni gde su prikazani putnici metroa ilustrovano je kako čujuće osobe naglo reaguju (trgnu se, odskoče) kada im neko spusti ruku na rame, kao da zaziru od dodira ili fizičkog kontakta. Sledeća scena uočava opsesiju čujućih osoba telefonom. U ovom slučaju devojka razgovara sa drugom osobom preko telefona, isključujući grupu prijatelja koji su tog trenutka sa njom. Ove scene šalju univerzalnu poruku koja ukazuje da niko nije savršen i da svako i sve ima svoje prednosti i nedostatke.

Nakon pauze od trideset godina, zahvaljujući permanentnom razvoju tehnologije, dolazi do ekspanzije znakovanog muzičkog stvaralaštva kako kod pripadnika zajednice Gluvih, tako i od strane tipične populacije. Sa digitalizacijom se javljaju nove mogućnosti muzičkog izražavanja Gluvih, koje omogućavaju kreiranje novih muzičkih vrsta i oblika koji koriste inovativne pristupe i eksperimentisanje na različitim nivoima.

Elementi fenomena muzičkog izražavanja Gluvih

Znakovana muzika kao fenomen je umetnička forma koja zadobija sve veće interesovanje i priznanje unutar zajednice Gluvih i među čujućom publikom. S jedne strane, ona može da inkorporira znakovane poetske karakteristike (lirske sadržaje), vizuelne muzičke elemente i ples. S druge, ona se oblikuje u vizuelne doživljaje sa strukturiranim pokretima ruku i facijalnim ekspresijama koje nose jedinstvene osobine i poruke bez upotrebe teksta. Znakovana muzika kreće se i kombinuje u rasponu tih elemenata stvarajući nove kvalitete, ali se razlikuje od svakog navedenog elementa ponaosob (Canadian Cultural Society of the Deaf, 2015).

Pojam znakovanje u muzici ima šire značenje od korišćenja znakovnog jezika, jer sadrži i primenu kodiranih multisenzornih umetničkih znakova koji podrazumevaju veoma upečatljive senzacije koje inkorporiraju pokret tela, auditivnu i vizuelnu interpretaciju sadržaja ili poruke (Duarte, 2017). Znakovana poezija se razlikuje od muzike, ali i deli sa njom neke elemente koje ova dva umetnička izraza koriste. Naime, znakovana poezija, kao i verbalna, koriste tri elementa u izražavanju, i to rimu, ritam i metriku ili versifikaciju. Znakovana muzika podrazumeva stvaranje spektra konkretnih i apstraktnih muzičkih znakova koji su rezultat „beskrajne” kombinacije elemenata poput ritma, dinamičnosti, rime, ekspresivnosti, ikoničnosti, intenziteta muzičkog doživljaja i kombinacije uloga izvođača. Navedeni muzički elementi sadrže i auditivne aspekte (Caldas, 2012).

- Ritam utiče na to kako doživljavamo muzičko delo i tokom znakovanog performansa obezbeđuje kraj toka muzičke misli ili poruke (auditivna kadenca). Ritam se može ubrzati, usporiti, gubiti i vratiti, ali je uvek prisutan. U znakovanoj muzici predstavlja složeno preplitanje pokreta (zvuka) različitih visina i pauza u određenom vremenskom periodu. Znakovana muzika je veoma ritmična, ima više otkucaja, udaraca, pokreta kojima se manipuliše i kojima se kreiraju različiti ritmovi (2/4 ili 3/5). Ponekad izvođači u isto vreme koriste ritam (pokreti tela ili delova tela) i znakovanje (manuelna lirska poruka).
- Dinamičnost je odnos muzičkih tonova prema njihovoj jačini. U muzici Gluvih podrazumeva kretanje znaka ili signala u prostoru. Signal se kreće u okviru tri glavne ose, i to ose glave, grudne ose i ose karlice. Artikulacija sadržaja znakovne muzike produkuje se oko ove tri ose tela koje opisuju visinu tona, intenzitet, ritam i dinamiku muzičkih vibracija. Odnosno, specijalizacija i lokalizacija jezičkih elemenata organizovani su u okviru ovih muzičkih parametra koje izvođač produkuje (Zaghetto, 2012).
- Rima je deo poetskog izraza, a postiže se bogatstvom i elegancijom manuelne elaboracije u slanju estetske poruke. Znakovana poezija se ne zasniva na prevedenoj verziji pisanih reči, već je u potpunosti osmišljena i izvedena kroz ideje koje su predstavljene znakovanjem i pokretom. S obzirom na to da znakovani jezici imaju svoju verziju fonologije koja se ne konstruiše kroz auditivne obrasce, već određenim oblikom šake, njenom putanjom kretanja, orijentacijom dlana u prostoru i nemanuelnim signalima u vizuo-spacio-kinestetičkom sistemu, znakovana poezija i muzika se zasnivaju na vizuelnoj rimi (Bauman, 2006).
- Ekspresivnost ima za cilj da prenese lepezu i nijanse emocija, kao i poetiku svakog znaka. Postiže se prefinjenim pokretima celog tela, delova tela, delova lica i facijalnom ekspresijom u celini. Ova vrsta izražavanja jednako je bliska gluvim i čujućim osobama (npr. balet).
- Ikoničnost znakovane muzike omogućava izvođaču da neverbalnim putem „opiše” vizuelnu poruku ili događaj u određenom vremenu i prostoru. Znakovni jezici se primarno oslanjaju na ikoničnu strukturu izražavanja, ali ona je donekle prisutna i u govornim jezicima. Naime, verbalna poruka govornika može biti, u manjoj ili većoj meri, dopunjena neverbalnim elementima (prirodnom gestikulacijom i/ili facijalnom ekspresijom) da bi je što plastičnije i ubedljivije preneo sagovorniku. Ova činjenica ne znači da znakovni jezici nastaju kao direktan prevod govornih jezika. Naprotiv, znakovni jezici, kao što smo i ranije naveli, imaju specifičnu i složenu gramatiku koja

omogućava gluvim osobama da prenesu konkretne, apstraktne, pa i muzičke poruke i ideje (Johnston & Erting, 1989).

- Intenzitet znakovanja manifestuje se kroz intenzitet pokreta (dela znaka ili znaka u celini) i može biti brz ili spor, jak ili slab. Na primer, intenzitet vetra, talasanja mora, brzine kretanja nekog predmeta kroz vazduh itd. postiže se promenom intenziteta pokreta dela tela ili tela u celini, koji opisuju nijanse ili procese promene određene pojave.
- Položaj tela ili pozicija izvođača na sceni tokom muzičkog performansa opisuje promene uloge i karaktere likova koje želi da predstavi, uključujući i njihove glasove. Promena položaja tela, praćena telesnom i facijalnom ekspresivnošću, ima za cilj da opiše uloge koje izvođač predstavlja u muzičkom izvođenju.

Skloni smo da muziku, pre svega, povezujemo sa sluhom i da vizuelne forme muzike doživljavamo kao prateću interpretaciju auditivne percepcije. Međutim, istorija i izučavanje različitih oblasti umetnosti ukazuju na nešto drugo. Na primer, u muzici tipične populacije izvođač koji svira na nekom instrumentu pomeranjem ruku aktivira i proizvodi prijatnu auditivnu senzaciju. U znakovanoj muzici ruke Gluve osobe su instrumentalizovane, one predstavljaju primarni instrument koji, u kombinaciji sa celim ili delovima tela i facijalnom ekspresijom, stvara vizuelne i auditivne muzičke elemente koji zajedno proizvode muzički doživljaj.

Muziku mogu doživeti različita čula i svi u njoj mogu uživati. Gluvi izvođač prima vibracije muzičkih instrumenata (posebno udaračkih) kroz taktilnu percepciju (šake, tabani) i svoj lični osećaj prevodi u znakovni jezik. Prevođenje lirskih i/ili muzičkih elemenata ostvaruje promenom položaja šake i prstiju. Pokretanja ruku u različitim ravnima (sagitalna, frontalna, transverzalna) kroz linearno i ugaono kretanje izvor su bogatstva informacija koje se mogu proizvoditi (visoki i niski tonovi, trajanje tona, ritam, dinamičnost...). Facijalna ekspresija omogućava dodatne informacije, koje mogu da se odnose na iskazivanje emocija, opisivanje muzičkog instrumenta (npr. naduvani obrazi i pokretanje usana kao da se svira neki duvački instrument), ritmičko pokretanje obraza i usana prenose informacije o ritmu i tonu (muzičkim auditivnim elementima), a niz asinhronih i sinhronih kombinacija pokreta očiju, obrva, obraza i usana izvor su brojnih poruka o kvalitetu muzike i lirskom sadržaju muzičke interpretacije bilo koje vrste ili oblika. Položaj ramenog pojasa u celini, nogu i celog tela upotpunjavaju i podržavaju informacije proizvedene u primarnom prostoru.

Vrste i oblici fenomena muzičkog izražavanja Gluvih

Zajednica Gluvih koja koristi znakovni jezik vulnerabilna je na predrasude i diskriminatornu praksu društva, a mogućnosti da se izraze kroz muziku vekovima su bile restriktivne. Danas je prihvatanje znakovane muzike

u teoriji muzike prilično nov fenomen, koji se multidisciplinarno proučava. Odnos između kulture i muzike postoji hiljadama godina, ali tema povezivanja kulture Gluvih sa muzikom je nova u muzičkoj nauci (Best, 2018).

Naučna istraživanja ukazuju da znakovana muzika nije samo muzički pokret; ona ima svoju istoriju, tradiciju, vrste i oblike, „podiže svest o kulturi Gluvih, ruši stereotipe o gluvoći, i promovira stilove muzičkog izražavanja zasnovanog na estetici Gluvih” (Best, 2015/2016, p. 64). Ako želimo da razumemo kulturnu i umetničku složenost znakovane muzike, prvo moramo da upoznamo njene vrste i oblike, ali i kulturni kontekst u širem smislu.

Gledano u celini, pripadnici zajednice Gluvih imaju donekle ambivalentan i neujednačen odnos prema muzici jer je doživljavaju tekovinom čujuće populacije. „Tvrda struja” u okviru kulture Gluvih priznaje samo one vrste i oblike znakovane muzike koji ne sadrže govorne elemente (npr. instrumentalizovana muzika, prevedene pesme čujućih interpretatora na znakovni jezik), dok bilingvalno orijentisani pripadnici kulture Gluvih koriste sve elemente muzičkog izražavanja (auditivne, vizuelne, spaciokinestetičke) koji su razumljivi i Gluvim i čujućim osobama. Zbog toga je muzička produkcija gluvih i nagluvih muzičkih umetnika veoma raznolika u želji da se približi što širem auditorijumu. To nikako ne znači da je interesovanje za muziku u kulturi Gluvih ograničeno. S jedne strane, postoji veliko interesovanje, ali su prisutni afiniteti prema različitim vrstama i oblicima muzičkog izražavanja (žanrovima i podžanrovima), što se paralelno dešava i u populaciji čujućih. I među pripadnicima čujuće populacije postoje razlike u tome koju vrstu muzike više vole. S druge strane, „tvrda struja” u okviru zajednice Gluvih želi da i kroz znakovanu muziku naglasi vrednosti, bogatstvo, značaj i snagu kulture kojoj pripada, a koja je vekovima bila omalovažavana.

Prateći načine izvođenja znakovane muzike u poslednjih sto i više godina, one mogu da se svrstaju, prema Bahanu (Bahan, 2006), u dve glavne vrste, i to perkusiono znakovanje i prevedene pesme. Perkusiono znakovanje su jednostavnije ritmičke izvedbe koje potiču iz perioda tridesetih godina prošlog veka. To je, na primer, pesma „Oh Darn, ja ništa ne čujem” (Oh Darn, I Hear Nothing), koju izvodi nepoznata grupa muškaraca sa tipičnim ritmom 1-2-1-2-3” (Canadian Cultural Society of the Deaf 2015, p. 8). U perkusione pesme ulazi i podžanr znakovanog hip-hopa, ili dip-hop kako ga je imenovao Gluvi reper (Wawa) 2005. godine (WaWa’s World, 2021). Znakovani hip-hop javlja se na muzičkoj sceni devedesetih godina prošlog veka, „pristupačan je medij koji se lako prevodi u estetiku Gluve muzike, jer su njegove tri glavne komponente taktovi, znakovana lirika i kretanje” (Best, 2018, p. 3). Tipično izvođenje dip-hopa podrazumeva gluve i nagluve izvođače koji „istovremeno izvode vokalizovani i znakovani rep preko sistema petlje (loop system) u pozadini” (Best, 2015/2016, p. 73).

Podvrste ovih pesama karakteristične su po tome što, pored ritmovanja znakova, koriste četiri vrste pokreta, poput zadržavanja, specifičnih puteva kretanja, naglašavanja pokreta i različitog trajanja pokreta. „Ritam se u poeziji i muzici na znakovnom jeziku može opisati u smislu promena koje se dešavaju unutar znakova ili na prelazu između znakova (pokreta) i perioda bez promene (zadržavanje)” (Suon-Spence, 2005, p. 45). Klajton Vali (Valli, 1993) uspostavio je četiri bazična tipa pokreta koji mogu da stvore poetski i muzički ritam i metrik:

- naglašeno zadržavanje u vidu duge pauze, suptilne pauze i naglog zaustavljanja;
- naglašavanje pokreta – dugo, kratko, naizmenično, repeticija pokreta;
- veličina pokreta koja implicira povećanu putanju kretanja, smanjeno kretanje, redukovana putanja kretanja, akceleracija kretanja i
- trajanje kretanja koje može biti regularno, sporo ili brzo.

Prevedene pesme uključuju više podvrsta i načina prevođenja pesama na znakovni jezik, „od doslovnog prevoda do prevoda u kojima se sprovede manje ili veće izmene teksta”, što zavisi od kreativnosti i nadahnuća izvođača (Listman et al., 2018, p. 1).

Sve vrste znakovane muzike, perkusione i prevedene pesme mogu se javiti u dva primarna oblika: pesme koje se izvode uživo ili putem video-zapisa. Analiza postojeće muzičke scene i praksa pokazale su da je primarnu poddelu moguće proširiti u pet pojavnih oblika (Cripps et al., in press; Maler, 2015; Timm, 2013).

- Uživo prevođenje pesama na znakovni jezik koje izvode čujući izvođači – auditivni muzički sadržaj na koncertu istovremeno prevodi profesionalni tumač za znakovni jezik. Moguće je i amatersko prevođenje sadržaja na proslavama, školskim priredbama, crkvenim službama i sl. Na taj način čujući muzičari žele da približe sadržaj pesama populaciji Gluvih.
- Uživo izvođenje znakovanih pesama Gluvih umetnika predstavljaju originalne kompozicije Gluvih umetnika koje su, pre svega, namenjene zajednici Gluvih, ali i čujućem auditorijumu. Poznata su koncertna izvođenja mnogih Gluvih muzičara (npr. Sean Forbes, Signmark, Wawa Waam itd.).
- Video-snimci čujućih muzičara čiju muziku prevode profesionalni tumači na znakovni jezik. Snimljeni spotovi ovog tipa su sve prisutniji i na našoj muzičkoj sceni, mada se načini prevođenja razlikuju. Kroz dva muzička spota sa domaće scene ukazujemo na razlike u kvalitetu prevođenja. U prvom primeru muzička grupa S.A.R.S. izvodi pesmu „Gluva” (S.A.R.S., 2021). Dok muzička grupa peva pesmu, na celom ekranu sa crnom pozadinom pojavljuju se samo tumači obučeni u crnu garderobu. Tumači i njihovi delovi

tela koji nisu pokriveni crnom garderobom dominiraju celim ekranom dok prevode pesmu izvođača koji se ne vide. Istovremeno se prevodi i tekst pesme i muzika koja je prati, tako što kroz pokret ruku, tela, facijalnu ekspresiju, intenzitet znakovanja, promenu broja prevodilaca i položaja njihovog tela, pored sadržaja pesme, opisuju ritam, rimu, ikoničnost, dinamičnost i ekspresivnost muzike. U drugom primeru Biljana Krstić sa „Bistrik orkestrom” izvodi pesmu „Smilj Smiljana” (Krstić, B. i Bistrik Orkestar, 2019). Na ekranu dominiraju pejsaž kao pozadina, pevačica i svirač gajdi. U donjem levom uglu nalazi se manji ekran sa crnom pozadinom i tumačem koji doslovno prevodi tekst pesme u ritmu u kojem Biljana Krstić peva, bez ikakve ekspresivnosti. Muzika koja prati sadržaj ove pesme ostaje nepoznanica za gluvu osobu. Audiocentričan prevod nije dovoljan da gluva ili nagluva osoba doživi i uživa u muzici. Naprotiv, ona još više naglašava da njima muzika nije dostupna.

- Video-snimci originalnih muzičkih dela Gluvih umetnika imaju veliku vrednost za zajednicu Gluvih. S jedne strane, uvek su dostupni, a sa druge, mogu u njima uživati kad god poželev. Video-zapisi koji predstavljaju originalne pesme predstavljene na znakovnom jeziku mogu se značajno razlikovati. Neki muzički spotovi izvode se u potpunosti na znakovnom jeziku i ne uključuju vokalizaciju (na primer, muzički video objavljen na jutjubu pod nazivom „One world, two hands”). Neki video-zapisi izvode se na znakovnom jeziku, ali uključuju i vokalizaciju. Šon Forbs (Sean Forbes), na primer, vokalizuje svoje pesme i repuje na jeziku znakova. Sajmark (Signmark) nastupa samo na znakovnom jeziku, ali njegov partner obezbeđuje vokalizaciju. Grupa „Betovenova noćna mora” (Beethoven’s Nightmare) u svojim video-zapisima nastupa tako što njeni članovi sviraju na muzičkim instrumentima i koriste prevodioce znakovnog jezika u svojim emisijama uživo i u muzičkim spotovima.
- Amaterski video-snimci sa prevodom na znakovni jezik postojeće vokalne interpretacije nastaju kao prevod vokalnih interpretacija na znakovni jezik u kućnim uslovima. Izvođači u ovim video-zapisima su čujuće osobe, a svi su pohađali kurs znakovnog jezika. Kvalitet prevoda ovih interpretacija varira (Peters & Seier, 2009).

Da bismo na kvalitetan način približili prethodnu diskusiju, putem video-prikaza dajemo multimedijalno objašnjenje o tome koliko je važan profesionalni tumač za znakovanu muziku. Profesionalni i specijalizovani tumač za muziku Amber Galovej Galego (Amber Galloway Gallego) prevodi audiocentričnu u znakovanu muziku na veoma kvalitetan način. Ona igra celim telom, celim svojim bićem, kako bi dočarala svet muzike populaciji Gluvih (Caswell, 2017).

Zaključak

Nakon analize pristupa muzici kao fenomenu, istorijske i sociokulturne pozadine znakovane muzike i manifestacije muzičkog izraza pripadnika kulture Gluvih, približili smo više tema i, verovatno, u nedostatku prostora da se razrade na širem i dubljem nivou, otvorili brojna pitanja.

Multidimenzionalnost znakovane muzika u kulturi Gluvih ogleda se u vizuo-spacio-kinestetičkoj komunikaciji, sa svim fonološkim, morfološkim, sintaksičkim, semantičkim i pragmatičkim strukturama koje nisu bliske tipičnoj populaciji. Specifičan lingvistički konstrukt se tokom istorije mogao sačuvati samo ako je bio snimljen u obliku dokumentarnog filma, te su podaci o ranijim muzičkim znanjima i aktivnostima gluvih i nagluh osoba veoma oskudni.

Sledeći izazov u izlaganju teme rada bio je opisati elemente, vrste i oblike fenomena znakovane muzike, kao i značaj profesionalnog tumača za znakovanu muziku bez multimedijalne prezentacije.

Analiza fenomena znakovane muzike potvrđuje njenu kompleksnost, specifičnost, multidimenzionalnost, muzičke kvalitete, interpretacije, te potrebu za permanentnim i multidisciplinarnim izučavanjem.

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The phenomenon of signed music in Deaf culture

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Introduction. Music in the Deaf community is a socio-cultural phenomenon that depicts a specific identity and way of experiencing the world, which is just as diverse, rich and meaningful as that of members of any other culture. *Objective.* The aim of this paper was to point out the historical and socio-cultural frameworks, complexity, richness, specific elements, types and forms of musical expression of members of the Deaf community. *Methods.* The applied methods included comparative analysis, evaluation, and deduction and induction system. *Results.* Due to limitations or a lack of auditive component, the members of Deaf culture use different communication tools, such as speech, pantomime, facial expressions and sign language. Signed music, as a phenomenon, is the artistic form which does not have long history. However, since the nineties of the past century and with technological development, it has been gaining greater interest and acknowledgement within the Deaf community and among the hearing audience. Signed music uses specific visuo-spatial-kinaesthetic and auditive elements in expression, such as rhythm, dynamism, rhyme, expressiveness, iconicity, intensity of the musical perception and the combination of the role of the performer. *Conclusion.* Signed music as a phenomenon is an art form that incorporates sign poetic characteristics (lyrical contents), visual musical elements and dance.

Keywords: phenomenon, signed music, Deaf culture

PRIMLJENO: 06.10.2021.

REVIDIRANO: 11.11.2021.

PRIHVAĆENO: 13.11.2021.



Students' attitudes toward ESP course at university level

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Introduction. English for Specific Purposes (ESP) at universities has a challenging goal of meeting the needs of usually large and heterogeneous groups of students. *Objective.* The aim of this study was to examine students' attitudes toward the ESP course, acquired knowledge, and course materials at the Faculty of Special Education and Rehabilitation, University of Belgrade. In addition, the study examined the possible influence of students' general English proficiency on the tested variables. *Methods.* An online questionnaire was used to collect data from 75 students who completed the ESP course in 2020 or 2021. Their general English proficiency was assessed by an online general English test. *Results.* The results showed that most students were satisfied with the acquired professional English language knowledge and available course materials and that their attitudes toward the completed ESP course were not influenced by their general English proficiency. *Conclusion.* These results are encouraging since they indicate overall student satisfaction with the ESP university course taught to a large class.

Keywords: ESP, general English, course materials, technical vocabulary, special education

Introduction

Unlike English for General Purposes (EGP), which aims to improve students' general English proficiency, the main aim of English for Specific Purposes (ESP) is to meet learners' specific needs by focusing on language activities relevant to specific topics, disciplines, or occupations (Dudley-Evans & St John, 1998). Target learners of ESP courses are usually adults, professionals, or university students who are expected to have some previous general English knowledge (Ignjačević, 2008). The relationship between teachers and students in ESP has been described as “different but complementary”, where teachers are language specialists with pedagogical skills and students have some

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professional knowledge in their mother tongue (Sarmiento et al., 2018). However, it is very difficult to make generalized assumptions regarding their knowledge of English. There are indications that ESP students usually have intermediate or advanced knowledge of English (Liu & Berger, 2015), although, nowadays, there are many ESP courses designed for pre-intermediate and intermediate English language learners (Day & Krzanowski, 2011).

Foreign language learning at university level aims to provide students with professionally oriented language knowledge and skills through carefully designed course and content (Đorović, 2011). Course materials used in ESP also significantly differ from those used in EGP. Their design largely depends on the needs analysis as one of the key principles in ESP (Richards, 2001). This means that an ESP coursebook at university level should be designed according to students' needs, i.e., it should be related to the students' field of study, include informative texts, and focus on topic-related vocabulary and tasks. Some authors (Blagojević, 2013; Glišović, 2014) emphasize the need and advantages of using teaching materials based on authentic language in ESP courses at university level (e.g., newspaper articles, original texts, video materials, etc.) with the aim to provide university students with "real-life" materials related to their field of study. Although authentic texts are considered crucial in teaching ESP by many language teachers, they can be too complex for students at different levels of linguistic competence, and should thus be carefully selected and based on both students' professional needs and their previous language knowledge (Blagojević, 2013). Since ESP classes at university level can be very large and heterogeneous in relation to students' general English proficiency, it is often needed to adapt or simplify such texts to meet the needs of all students in the class.

Selecting a syllabus framework is another important factor in designing an ESP course and is the basis of its instructional focus and content (Richards, 2001). Ideally, an ESP course should not only cover specific vocabulary, contexts, and topics relevant to students' needs and interests, but also provide opportunities for practicing general language skills. However, the reality is different in very large classes, where there is neither the time nor the opportunity to cover all of the above. With over 200 students in one class, the syllabus framework of the ESP course at the Faculty of Special Education and Rehabilitation (FASPER) in Belgrade can be described as predominantly lexical (Ivančević Otanjac, 2014a), focusing on target vocabulary, or in this case technical vocabulary (words which are closely related to a subject area and which are relatively common in that specific area but not elsewhere (Nation, 2001). However, it should not be wrongly assumed that learning vocabulary in ESP means learning individual words out of context (Đurović & Silaški, 2010). The context in which technical words occur, subject-related topics, and appropriate tasks and activities all have great influence on language acquisition and student motivation. As Manić and Vučo (2015) point out, student motivation

to learn technical vocabulary increases when ESP course is related to the subject matter of other professional subjects. With regard to this, the ESP syllabus at FASPER could also be described as topical (organized around topics relevant to the students' field of study – in this case special education, different types of disabilities, impairments, available support, etc.), and task-based (organized around various tasks and activities the students will need to perform in English, e.g., reading authentic sources in English for the purpose of doing research in their field of study, writing papers in English, giving presentations, translating professional texts from English into their mother tongue, etc.). The importance of subject-related topics and vocabulary is emphasized by the fact that the final exam in this course assesses both technical vocabulary and general English knowledge, awarding equal number of points at both parts of the test. ESP vocabulary at university level should be considered equally important as general English as it enables university students to advance in their professional fields and do academic research (Mičić & Sinadinović, 2013). The ESP course at FASPER sets a very challenging goal in attempting to meet the needs of a very large and heterogeneous group of students and provide them with adequate English language knowledge in the field of special education through authentic materials adapted to their general English skills.

With regard to all of the above, this study aimed to examine students' satisfaction with the acquired professional English language knowledge and available course materials. In addition, the research also tried to determine whether general English proficiency had a significant influence on students' attitudes toward the completed ESP course and grammar and vocabulary acquisition.

Method

The sample included 75 first and second-year students of Special Education and Rehabilitation at the University of Belgrade who completed the ESP course in June 2020 or 2021. The participants were 19-25 years of age ($M = 20.56$, $SD = 1.21$). Gender distribution was uneven, with 71 (94.7%) women and only four (5.3%) men. Most participants (80%) previously learned English in elementary and secondary school, 14.7% had additional English language lessons either in a foreign language school or with a private teacher, while only 5.3% had English only in elementary school. Also, most participants did not have difficulties in passing the final ESP exam at the end of their first year of study (82.7% passed at their first attempt, 13.3% at the second attempt, only one student [1.3%] at the third attempt, and there were two students [2.7%] who did not pass the final exam by the end of the fourth exam term in September 2021).

The survey was conducted using the Questionnaire created in Google Forms and distributed online to over 400 students. Before completing the Questionnaire, the students were informed in written form that the survey was anonymous and that

the answers would be used for the purpose of this study. With only 75 completed questionnaires, it can be said that the response rate was not particularly high (below 20%). The first part of the Questionnaire was used to collect the demographic data, while the second part included four statements regarding the participants' attitudes toward the completed ESP course, acquired knowledge, and course materials. The participants had to rate each statement on a 5-point scale (from 1-strongly disagree to 5-strongly agree). Data on the participants' general English proficiency was collected by the General English Test (Cambridge Assessment English, 2021) available online at <https://www.cambridgeenglish.org/test-your-english/general-english/>, which the students were asked to do before completing the Questionnaire.

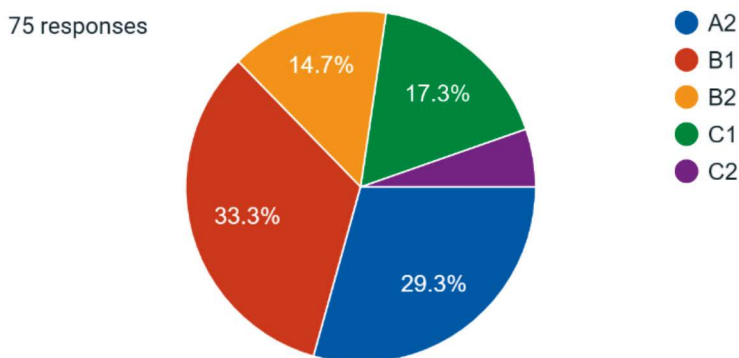
Descriptive statistics methods were used in data processing. Spearman's correlation coefficient was used to examine the relationship between variables. One-way ANOVA was used to determine the possible influence of general English proficiency on the tested variables.

Results and discussion

Before completing the questionnaire, the participants were asked to do the General English Test in order to determine their proficiency level (A2-C2, according to the Common European Framework of Reference for Languages (Council of Europe, 2001). The results are presented in Chart 1.

Chart 1

Participants' general English proficiency level



The results show that most participants were at B1(33.3%) and A2 (29.3%) levels. These results were not surprising since most participants had previously learned English only in elementary and secondary school (80%), and since the expected proficiency level of first-year students at the beginning of the ESP course at FASPER is between pre-intermediate and intermediate (A2-B1) (Ivančević Otanjac, 2014b). However, the remaining 37.4% were students

at B2 (14.7%), C1 (17.3%), and even C2 (5.4%) level. While appropriacy, i.e., the appropriate task level which corresponds to students' competence, is one of the key factors in task-based language learning (Wilson, 1986), the group's heterogeneity makes it difficult to develop an ESP course which would equally satisfy the needs of all students. Similar findings were reported by Enesi, Vrapı, and Trifoni (2021) who examined the difficulties related to ESP students from the perspective of ESP teachers at three universities in Albania. They determined that one of the most prominent difficulties reported by ESP teachers was the fact that they had students of different proficiency levels in the same class. Class size is another hindering factor in developing a comprehensive ESP course for university students. In their research on difficulties in teaching ESP courses at Vietnam universities, Hoa and Mai (2016) point out that large classes significantly affect ESP teaching efficacy and student motivation, especially when students are not at the same proficiency level and when the activities are either too difficult or too easy for them.

The second part of the Questionnaire was used in this study to determine the participants' satisfaction with the acquired professional English language knowledge and available course materials in the field of special education. It included four statements (see Table 1). The participants were asked to rate each statement on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). Mean scores, standard deviations and 99% confidence intervals for each statement are shown in Table 1.

Table 1

Participants' attitudes toward grammar and vocabulary acquisition, ESP course, and course materials (N = 75)

Statements	M	SD	99% CI
I had no difficulty in learning grammar in the ESP course during my 1 st year of study	4.33	1.00	4.03 – 4.63
I had no difficulty in learning technical vocabulary in the ESP course during my 1 st year of study	4.4	0.74	4.18 – 4.62
I believe I managed to acquire adequate English language knowledge in the field of special education during my first year of study	4.05	0.94	3.77 – 4.33
The available course materials (coursebook, additional exercises, presentations, videos, etc.) were all I needed to prepare for my final exam	4.83	0.38	4.72 – 4.94

The results show that the participants mainly had positive attitudes toward the completed ESP course and grammar and vocabulary acquisition with lower bounds of 99% confidence intervals consistently far above the theoretical mean of a 5-point scale. All participants were satisfied with the available course materials as 82.7% rated this statement with 5 (strongly agree),

and the remaining 17.3% with 4 (agree). A moderately positive correlation was determined between the acquisition of grammar and technical vocabulary ($r_s = .61, p < .001$) and between the participants' satisfaction with the acquired knowledge and available course materials ($r_s = .43, p < .001$).

Several other studies reported similar results regarding students' overall positive attitudes toward ESP courses at universities, pointing out the importance and advantages of ESP curriculum for university students. Martinović and Poljaković (2010) examined attitudes of 149 first year students in the fields of Humanities and Social Sciences at the University of Zadar. They determined that students mainly had positive attitudes toward the teacher, English, and learning English despite the perceived lack of enthusiasm and effort in their English language classes. In their study on the analysis of students' motivation in choosing a foreign language course at non-affiliated university departments, Cvetković and Gorgiev (2019) analyzed a sample of 27 undergraduate and four master students at the Faculty of Philosophy, University of Niš. Their results showed that the participants chose ESP mainly for practical reasons, i.e., to improve knowledge related to their field of study and apply their general English knowledge according to their general interests. The study conducted by Bekteshi and Xhaferi (2020) on a sample of 239 first and second-year students of Engineering faculties at the University of Mitrovica showed that the majority of the participants believed the ESP course for engineering students was a "must", and that the students generally benefited from the ESP classes. The authors also pointed out the need for careful selection and adaptation of teaching materials based on students' needs and deficiencies while learning professional English. Arnó-Macià, Aguilar-Pérez, and Tatzl (2020) examined the perceptions of engineering students at two European universities (in Spain and Austria). Their results showed an overall satisfaction of engineering students with the ESP courses in relation to their expectations, learning objectives, perceived development of different skills, and evaluation of the ESP course as preparation for academic and professional communication.

This study also aimed to examine whether the participants' general English proficiency had a significant influence on three tested variables (grammar and technical vocabulary acquisition, and satisfaction with the ESP course). The results of one-way ANOVA are presented in Table 2.

The results show that there was no statistically significant difference in the participants' satisfaction with the ESP course in relation to their general English proficiency ($p > .05$). Furthermore, the fact that most participants (82.7%) passed their final exam at first attempt, shows that the students were mainly successful in the ESP course regardless of their general English proficiency. Similar results were reported by Chostelidou (2011) who analyzed the impact of general English on the effectiveness of ESP teaching intervention in a sample of 286 Business English university students in Northern Greece.

The results showed that ESP teaching intervention in the experimental group was successful and that, irrespective of general English proficiency, the experimental group outperformed the control group (which was not exposed to the ESP teaching intervention) in subject-related knowledge and skills. On the other hand, Maasum (2011) examined the role of general English in ESP success at Iranian universities and determined a strong positive correlation between the students' general English knowledge and their ESP achievement. However, as the author points out, the relationship between general English and ESP depends on many factors most of which were not controlled in the study.

Table 2

Influence of general English proficiency on examined variables

Variables	<i>General English proficiency M (SD)</i>				<i>F(3,67)</i>	<i>p</i>
	<i>A2</i>	<i>B1</i>	<i>B2</i>	<i>C1</i>		
Grammar acquisition	3.73 (1.12)	4.36 (0.86)	4.91 (0.30)	4.62 (1.12)	4.71	.005
Technical vocabulary acquisition	3.95 (0.90)	4.36 (0.64)	4.64 (0.50)	4.85 (0.38)	5.43	.002
Satisfaction with ESP course	3.68 (1.04)	4.04 (1.02)	4.18 (0.87)	4.46 (0.52)	2.04	.12

Table 2 shows that general English proficiency had a significant influence on the participants' attitudes toward the acquisition of grammar [$F(3,67) = 4.71, p = .005$] and technical vocabulary [$F(3,67) = 5.43, p = .002$]. These results were not surprising since it was expected that students at higher general English level would acquire grammar and vocabulary more easily in this ESP course.

Conclusion and limitations

This study showed that Special Education and Rehabilitation students at the University of Belgrade had mainly positive attitudes toward the completed ESP course and available course materials. Also, the research determined that general English proficiency had a significant influence on the acquisition of grammar and technical vocabulary, i.e., that students at higher general English levels had fewer difficulties in grammar and vocabulary acquisition. On the other hand, their general satisfaction with the ESP course and their final exam success were not influenced by their general English competence. However, it should be noted that the response rate of the sample was not very high since the online Questionnaire was distributed to over 400 students and completed by 75. Another limitation of this study could also be the assumption that the students who completed the Questionnaire were generally better in English, and thus had more positive attitudes and fewer difficulties, than those who decided not to participate.

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Stavovi studenata prema nastavi engleskog jezika struke na fakultetima

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Uvod: Nastava engleskog jezika struke na fakultetima ima za cilj da zadovolji potrebe obično velikih i heterogenih grupa studenata. *Cilj:* Cilj ovog rada je da ispita stavove studenata Fakulteta za specijalnu edukaciju i rehabilitaciju Univerziteta u Beogradu, prema nastavi engleskog jezika struke, stečenom znanju engleskog jezika iz oblasti specijalne edukacije i nastavnim materijalima. Pored toga, rad ispituje i mogući uticaj opšteg engleskog jezika na pomenute varijable. *Metode:* Za prikupljanje podataka je korišćen onlajn upitnik koji je popunilo 75 studenata koji su slušali Engleski jezik tokom 2020. i 2021. godine. Njihovo znanje opšteg engleskog jezika utvrđeno je dostupnim onlajn testom. *Rezultati:* Rezultati pokazuju da je većina studenata zadovoljna stečenim znanjem engleskog jezika iz oblasti specijalne edukacije i nastavnim materijalima, kao i da nivo znanja opšteg engleskog jezika nije bitno uticao na njihove stavove prema nastavi engleskog jezika struke. *Zaključak:* Dobijeni rezultati su ohrabrujući jer ukazuju na zadovoljstvo studenata nastavom engleskog jezika struke koja se izvodi u velikim grupama na fakultetu.

Ključne reči: engleski jezik struke, opšti engleski, nastavni materijal, stručni vokabular, specijalna edukacija

PRIMLJENO: 06.10.2021.
REVIDIRANO: 11.11.2021.
PRIHVAĆENO: 13.11.2021.

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Autori su dužni da ukažu na sukob interesa koji bi mogao da utiče na njihove rezultate i interpretacije.

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Glavni i odgovorni urednik zadržava pravo da bez upućivanja na recenziju odbije rukopise koji nisu pripremljeni u skladu sa ovim uputstvom, ne odgovaraju tematici časopisa ili ne ispunjavaju uslove za objavljivanje.

Časopis *Specijalna edukacija i rehabilitacija* primenjuje postupak dvostruko anonimnog recenziranja. Rukopise nezavisno ocenjuju najmanje dva recenzenta. Recenzente imenuje glavni i odgovorni urednik, odnosno urednik broja ili rubrike na predlog članova Uređivačkog odbora. Pored rukopisa, recenzentima se šalje uputstvo za ocenjivanje koje sadrži obrazac recenzije.

Originalni rukopis i recenzije ocenjuje urednik i donosi jednu od sledećih odluka: 1) objaviti bez izmena; 2) objaviti uz predložene izmene; 3) izmeniti i vratiti na recenziju; 4) rukopis nije za objavljivanje. Ukoliko recenzije nisu saglasne, urednik može tražiti dodatna objašnjenja od recenzenata ili angažovati trećeg recenzenta.

Po završetku postupka recenzije, autorima se šalju anonimne recenzije i komentari urednika. Od autora se očekuje da u roku od mesec dana dostave revidiran rukopis sa

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Konačna verzija prihvaćenog rukopisa dostavlja se autorima na uvid i odobravanje. Autori mogu uneti samo minimalne izmene u roku od tri dana. Nakon ove faze rukopis se ne može revidirati.

Period od prijema rukopisa do njegovog objavljivanja traje, u proseku, 90 dana.

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Odvojeno od rukopisa, kao poseban dokument treba priložiti naslovnu stranu koja sadrži:

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- Podatke o autorima: ime, srednje slovo i prezime, godina rođenja i afilijacija
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Za radove koji su nastali kao rezultat istraživanja na projektima, u napomeni treba navesti naziv finansijera projekta, naziv i broj projekta. Za radove koji su prethodno delimično izloženi na naučnom ili stručnom skupu, u napomeni treba navesti podatke o skupu. Za radove koji su deo doktorske disertacije ili master rada, u napomeni treba navesti podatke o doktorskoj disertaciji ili master radu.

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Glavni naslov piše se velikim početnim slovom, podebljano i centrirano. Kratak naslov piše se u zaglavlju (header) velikim slovima. Naslovi odeljaka pišu se velikim početnim slovom, podebljano i centrirano. Naslovi drugog reda pišu se velikim početnim slovom, podebljano i poravnato ulevo. Naslovi trećeg reda pišu se velikim početnim slovom, podebljano, kurzivom i poravnato ulevo.

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Originalni naučni radovi i pregledni radovi treba da budu obima do 30000 znakova sa razmacima, ne računajući reference i zahvalnicu. Urednički odbor može odobriti objavljivanje radova većeg obima kada izražavanje naučnog sadržaja to zahteva.

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Naslov

Naslov rada se dostavlja na srpskom i engleskom jeziku. Naslov treba da bude precizno i jasno formulisan, podudaran sa temom rada i da sadrži reči prikladne za pretraživanje i indeksiranje.

Apstrakt

Apstrakt dužine do 250 reči dostavlja se na srpskom i engleskom jeziku. U apstraktu ne treba navoditi skraćenice i reference.

Originalni naučni radovi i pregledni radovi treba da sadrže strukturisani apstrakt sa istaknutim naslovima sledećih odeljaka: *Uvod, Cilj, Metode, Rezultati i Zaključak*.

Za ostale kategorije radova dostavlja se nestrukturisan apstrakt, izuzimajući prikaze za koje apstrakt nije obavezan.

Ključne reči

Uz apstrakt treba dostaviti tri do pet ključnih reči na srpskom i engleskom jeziku. Ključne reči treba da budu relevantne za sadržaj rada, prikladne za pretraživanje i indeksiranje.

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Ključne reči: prva, druga, treća

Keywords: first, second, third

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Uvod: U uvodnom delu se definiše problem istraživanja, daje sažet prikaz relevantnih teorija i prethodnih istraživanja, iskazuje namera autora da proširi ili preispita postojeća znanja i postavlja cilj istraživanja.

Metode: Postupak uzorkovanja, uzorak, primenjeni instrumenti i procedure i statističke metode treba opisati dovoljno detaljno da se rezultati mogu ponoviti. Široko poznate metode ne treba opisivati, već samo navesti njihov naziv i referencu.

Rezultati: Rezultate treba predstaviti pregledno i jasno, koristeći tabele ili grafikone, bez dupliranja. Decimalne brojeve treba pisati sa tačkom. Nule ne treba pisati kada

se izveštava o statistici čija je apsolutna vrednost teorijski ograničena na raspon 0–1 (npr. r , p , α). Decimalne brojeve treba zaokružiti na dve decimale, osim procenata koji se zaokružuju na jednu decimalu i rezultata za koje je podatak o razlikama na trećoj decimali važan (npr. p). Rezultate statističke obrade treba navoditi na sledeći način: ($t(88) = 4.39, p < .001, d = 0.63$) ili ($r = -.11, p = .38$).

Tabele: Tabele treba da budu urađene u Word formatu i označene arapskim brojevima, po redu pojavljivanja u tekstu. Broj se piše iznad tabele i naslova podebljano i poravnato ulevo (npr. **Tabela 1**). Naslov se piše ispod broja sa dvostrukim preredom, velikim početnim slovom, kurzivom i poravnato ulevo. Tabele ne treba da sadrže vertikalne linije. Horizontalne linije treba koristiti na vrhu i dnu tabele i za odvajanje zaglavlja od ostalih redova. Sve tekstualne unose treba pisati velikim početnim slovom. Naslove u zaglavlju i sve unose treba pisati centrirano, osim unosa u krajnjoj levoj koloni koji treba da budu pomereni ulevo. Napomena u kojoj se objašnjava sadržaj (npr. skraćenice, zvezdice kojima se označava verovatnoća) navodi se ispod tabele. U tekstu se tabele navode na sledeći način: „U Tabeli 1...“.

Grafikoni i slike: Grafikoni i slike označavaju se arapskim brojevima, po redu pojavljivanja u tekstu. Broj se piše iznad grafikona ili slike i naslova podebljano i poravnato ulevo (npr. **Grafikon 1**, **Slika 1**). Naslov se piše ispod broja sa dvostrukim preredom, velikim početnim slovom, kurzivom i poravnato ulevo. Grafikoni i slike treba da budu čitljivi po veličini i rezoluciji. Legendu koja objašnjava slimbole treba pozicionirati unutar granica grafikona ili slike. Napomena u kojoj se objašnjava sadržaj (npr. skraćenice, autorska prava) navodi se ispod grafikona ili slike. U tekstu se grafikoni i slike navode na sledeći način: „Na Grafikonu 1...“.

Diskusija: Diskusija treba da sadrži interpretaciju dobijenih rezultata u kontekstu teorija i istraživanja predstavljenih u uvodnom delu, uz objašnjenje da li navedene studije podržavaju ili osporavaju dobijene rezultate. U diskusiji treba navesti prednosti i ograničenja istraživanja. Poželjno je navođenje preporuka.

Zaključak: Zaključke treba povezati sa ciljevima istraživanja izbegavajući neosnovane izjave koje ne podržavaju dobijeni rezultati. Ne treba detaljno ponavljati podatke koji su dati u odeljcima *Uvod* i *Rezultati*. Nove informacije treba razdvojiti od prethodnih istraživanja i obrazložiti doprinos rada unapređenju naučnih saznanja.

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Fusnote: Fusnote ne treba koristiti, osim za komentare i dodatni tekst.

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Za iscrpan spisak pravila koja se koriste kada se u okviru teksta referiše na korišćene izvore treba konsultovati važeću verziju Priručnika Američke psihološke asocijacije, tzv. APA 7 priručnik (American Psychological Association. (2020). *Publication Manual of the American Psychological Association (7th ed.)* <https://doi.org/10.1037/0000165-000>). U nastavku sledi opis nekih od najvažniji pravila.

- Ukoliko se referiše na izvor koji ima jednog ili dva autora, uvek se navode njihova prezimena i godina izdanja (npr. Johnson & Stevens, 1999; Popović, 2013; Popović i Jovanović, 2009; Stevens, 2011).
- U slučaju da se prezimena autora navode van zagrada, odnosno u sklopu rečenice, onda se samo godina piše u zagradi (npr. kao što Popović i Jovanović (2009) smatraju...).
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Primeri navođenja članaka koji imaju do 20 autora:

- Banković, S., Baloš, V., i Brojčin, B. (2019). Forme i funkcije komunikacije kod učenika s poremećajem iz spektra autizma. *Specijalna edukacija i rehabilitacija*, 18(3), 237-271. <https://doi.org/10.5937/specedreh18-23572>
- Winter, K., Spengler, S., Bermpohl, F., Singer, T., & Kanske, P. (2017). Social cognition in aggressive offenders: Impaired empathy, but intact theory of mind. *Scientific Reports*, 7(1), 1-10. <https://doi.org/10.1038/s41598-017-00745-0>

Primer navođenja članka koji ima više od 20 autora:

- Buttrick, N., Choi, H., Wilson, T. D., Oishi, S., Boker, S. M., Gilbert, D. T., Alper, S., Aveyard, M., Cheong, W., Čolić, M. V., Dalgar, I., Doğulu, C., Karabati, S., Kim, E., Knežević, G., Komiya, A., Laclé, C. O., Ambrosio Lage, C., Lazarević, L. B., ... Wilks, D. C. (2019). Cross-cultural consistency and relativity in the enjoyment of thinking versus doing. *Journal of Personality and Social Psychology*, 117(5), e71–e83. <https://doi.org/10.1037/pspp0000198>

Knjiga

Za razliku od prethodnih verzija priručnika, prema sedmom izdanju APA 7 priručnika, prilikom navođenja knjige potrebno je navesti samo naziv izdavača knjige, ali ne i mesto izdanja. Ukoliko se naziv knjige sastoji iz dva dela odvojena dvotačkom prva reč nakon dvotačke piše se velikim početnim slovom.

- Vuković, M. (2019). *Neurodegenerativni poremećaji govora i jezika*. Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju.
- Ganz, J. B. (2014). *Aided augmentative communication for individuals with autism spectrum disorders*. Springer. <https://doi.org/10.1007/978-1-4939-0814-1>

Poglavlje u monografiji ili tematskom zborniku

- Grbović, A., Jablan, B., i Stanimirović, D. (2016). Prihvaćenost srednjoškolaca sa oštećenjem vida od strane vršnjaka – razlike u samoproceni učenika i učenica. U A. Jugović, M. Japundža-Milisavljević, i A. Grbović (Ur.), *Socijalna inkluzija dece sa razvojnim smetnjama i problemima u ponašanju* (str. 257-264). Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju.
- Boisjoli, J. A., & Matson, J. L. (2010). General methods of assessment. In J. L. Matson (Ed.), *Social behavior and skills in children* (pp. 61-75). Springer. <https://doi.org/10.1007/978-1-4419-0234-4>

Saopštenje sa skupa

- Stakić, Đ. (2019, 22–25 maj). *Model za razrešavanje etičkih dilema i prestupa* [rezime saopštenja sa skupa]. 67. Kongres psihologa Srbije, Zlatibor, Srbija.

Ukoliko je saopštenje sa skupa štampano u celini (proceeding), primenjuju se pravila navođenja koja važe za radove u monografijama ili tematskim zbornicima.

Doktorska disertacija

- Đorđević, M. (2016). *Profil pragmatiskih sposobnosti odraslih osoba sa intelektualnom ometenošću* [doktorska disertacija, Univerzitet u Beogradu]. NaRDuS. http://nardus.mpn.gov.rs/handle/123456789/4222?locale-attribute=sr_RS

Reference bez autora

- Zakon o maloletnim učiniocima krivičnih dela i krivičnopravnoj zaštiti maloletnih lica, Službeni glasnik Republike Srbije br. 85/05. (2005).
- World Health Organization (WHO). (2018). *Strategic Guidance on accelerating actions for adolescent Health in South-East Asia Region (2018-2022)*. World Health Organization, Regional Office for South-East Asia.

Veb stranica

Primer navođenja veb stranice kada je autor teksta poznat:

- Bil, E. (2020, 10. maj). *Korona virus: zašto bi fizička udaljenost mogla da potraje još neko vreme*. BBC na srpskom. <https://www.bbc.com/serbian/lat/svet-52139608>

Primer navođenja veb stranice kada autor teksta nije poznat:

- World Health Organization. (2020, May 1). *Billions worldwide living with herpes*. <https://www.who.int/news-room/detail/01-05-2020-billions-worldwide-living-with-herpes>

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The title of the paper is submitted in Serbian and English. The title should be precisely and clearly formulated, consistent with the topic of the paper and should contain words suitable for searching and indexing.

Abstract

An abstract of up to 250 words is submitted in Serbian and English. Abstracts should not include abbreviations and references.

Original scientific papers and review papers should contain a structured abstract with distinct headings for the following sections: *Introduction, Objectives, Methods, Results and Conclusion.*

An unstructured abstract is submitted for all other categories of papers, except for reports for which an abstract is not required.

Key words

Abstracts should be accompanied by three to five key words in Serbian and English. Keywords should be relevant to the content of the paper and suitable for searching and indexing.

Key words are written below the abstract as follows:

Keywords: first, second, third

Structure

Introduction: The introductory part defines the research problem, gives a summary of relevant theories and previous research, expresses an author's intention to expand or review existing knowledge, and sets the research aim.

Methods: The sampling procedure, sample, applied instruments and procedures, and statistical methods should be described in detail so that the results can be repeated.

Well-known methods should not be described, but only their name and reference should be provided.

Results: Results should be presented clearly and concisely, using tables or charts, without duplication. Decimals should be written with a period. Zeros should not be written when reporting statistics whose absolute value is theoretically limited to the range 0–1 (e.g. r , p , α). Decimals should be rounded to two decimal places, except for percentages which are rounded to one decimal place, and results for which the data on differences on the third decimal place is important (e.g. p). The results of statistical processing should be reported as follows: ($t(88) = 4.39, p < .001, d = 0.63$) or ($r = -.11, p = .38$).

Tables: Tables should be in Word format and marked with Arabic numerals, in the order in which they appear in the text. The number is written above the table and the title, bold and left-aligned (e.g. **Table 1**). The title should be written below the number with double spacing, capitalized, italic, and left-aligned. Tables should not contain vertical lines. Horizontal lines should be used at the top and bottom of the table and to separate headers from other rows. All text entries should be capitalized. Headings in the header and all entries should be centered, except for the entries in the far-left column which should be left-aligned. A note explaining the content (e.g. abbreviations, asterisks indicating probability) should be given below the table. In the text, tables are listed as follows: “In Table 1...”.

Charts and figures: Charts and figures are marked with Arabic numerals, in the order in which they appear in the text. The number is written above the chart or figure and the title, bold and left-aligned (e.g. **Chart 1, Figure 1**). The title should be written below the number with double spacing, capitalized, italic, and left-aligned. Charts and figures should be legible in size and resolution. A legend explaining the symbols should be positioned within the boundaries of the chart or figure. A note explaining the content (e.g. abbreviations, copyright) should be given below the chart or figure. In the text, charts and figures are listed as follows: “In Chart 1...”.

Discussion: Discussion should include interpretation of the obtained results in the context of theories and research presented in the introductory part, with an explanation of whether the mentioned studies support or dispute the obtained results. Advantages and limitations of the research should be mentioned in the discussion. It is also advisable to provide recommendations.

Conclusion: Conclusions should be linked to research objectives by avoiding unfounded statements which are not supported by the obtained results. The data given in *Introduction* and *Results* sections should not be repeated in detail. New information should be separated from previous research and the contribution of the paper to the improvement of scientific knowledge should be explained.

Acknowledgements: Acknowledgments, at the end of the text, should state financial and technical assistance, advice, etc. For stating the names of persons and institutions, their consent is required.

References: The list of references includes only the references the author referred to in the paper, in alphabetical order, by the authors' surnames. All references are written in Latin. References by the same author are listed according to the year of publication, from the oldest to the most recent. References by the same author published in the same year should be marked with letters (e.g. 2019a, 2019b). References of several authors with the same first author are listed in alphabetical order according to the surname of the second author or, if they are the same, the third, etc.

Abbreviations: Full term should be given for each abbreviation when mentioned in the text for the first time, e.g. intellectual disability (ID).

Footnotes: Footnotes should not be used except for comments and additional text.

Referring to sources within the text

For a detailed list of rules applied when referring to sources within the text, please consult the valid version of the Publication Manual of the American Psychological Association (7th ed.), the so-called APA 7 manual (American Psychological Association. (2020). *Publication Manual of the American Psychological Association (7th ed.)* <https://doi.org/10.1037/0000165-000>). Some of the most important rules are given below.

- If reference is made to a source that has one or two authors, their surnames and year of publication are always given (e.g. Johnson & Stevens, 1999; Popović, 2013; Popović & Jovanović, 2009; Stevens, 2011).
- If the authors' surnames are not written in parentheses, i.e. as part of a sentence, then only the year is written in parentheses (e.g. as Popović and Jovanović (2009) consider ...).
- Each quote (literally quoting parts of the text) should be within quotation marks and followed by information about the page number the quote was taken from (e.g. this is indicated by numerous studies “which confirm the impact of playing violent video games on psychological processes” (Stojanović, 2019, p. 202)).
- If reference is made to a source which has three or more authors, only the surname of the first author is given followed by “et al.” in parentheses and within a sentence (e.g. in the research by Hue and others (Hue et al., 2004)).
- If two authors have the same surname, the first letter of their names should be added in front of each (e.g. A. Babić, 2014; B. Babić, 2012; E. Johnson, 2001; L. Johnson, 1998).
- If a reference has no author, the name of institution and the year should be provided (e.g. WHO, 2020).
- When referring to multiple sources, the order is alphabetical, and the sources should be separated by a semi-colon (e.g. Bijelić, 2018; Kovač, 2014; Vuletić, 2009). More references by the same author are listed chronologically, from the oldest to the most recent one.

Rules for listing references

References are given in accordance with APA 7 standards, at the end of the paper, in the References section. If a DOI number is available, it is necessary to provide this information as well. The DOI number should be provided as a link (e.g. <https://doi.org/10.2298/VSP160426283J>). The description and examples of listing common references are given below.

Journal article

According to APA 7 standards, if a paper has up to 20 authors, names of all authors should be listed. If the number of authors exceeds 20, it is necessary to state the first 19 and separate them from the last author with an ellipsis (...).

Examples of listing articles with up to 20 authors:

- Winter, K., Spengler, S., Bempohl, F., Singer, T., & Kanske, P. (2017). Social cognition in aggressive offenders: Impaired empathy, but intact theory of mind. *Scientific Reports*, 7(1), 1-10. <https://doi.org/10.1038/s41598-017-00745-0>

Example of listing an article with more than 20 authors:

- Buttrick, N., Choi, H., Wilson, T. D., Oishi, S., Boker, S. M., Gilbert, D. T., Alper, S., Aveyard, M., Cheong, W., Čolić, M. V., Dalgat, I., Doğulu, C., Karabati, S., Kim, E., Knežević, G., Komiya, A., Laclé, C. O., Ambrosio Lage, C., Lazarević, L. B., ... Wilks, D. C. (2019). Cross-cultural consistency and relativity in the enjoyment of thinking versus doing. *Journal of Personality and Social Psychology*, 117(5), e71–e83. <https://doi.org/10.1037/pspp0000198>

Book

Unlike previous versions of the manual, according to the seventh edition of the APA 7, when listing a book, it is necessary to state only the name of the book publisher, and not the place of publication. If the title of the book consists of two parts separated by a colon, the first word after the colon is capitalized.

- Ganz, J. B. (2014). *Aided augmentative communication for individuals with autism spectrum disorders*. Springer. <https://doi.org/10.1007/978-1-4939-0814-1>

Chapter in monographs or thematic collections

- Boisjoli, J. A., & Matson, J. L. (2010). General methods of assessment. In J. L. Matson (Ed.), *Social behavior and skills in children* (pp. 61-75). Springer. <https://doi.org/10.1007/978-1-4419-0234-4>

Conference presentation

- Stevković, Lj. (2019, September 18–21). *Self-reported juvenile domestic violence in Serbia* [Conference presentation abstract]. 19th Annual Conference of the European

Society of Criminology, Ghent, Belgium. https://ff2c65c5-2ae5-47f3-bf99-45ee5ed8ca36.filesusr.com/ugd/da07ac_2d1d13c05f4546308c2a028dad473ad6.pdf

If the presentation is printed in conference proceedings, citation rules for papers in monographs or thematic collections are applied.

Doctoral dissertation

- Clarke, B. D. (2013). *Parents' perceptions and awareness of cyberbullying of children and adolescents* [Doctoral dissertation, Antioch University]. AURA. <https://aura.antioch.edu/cgi/viewcontent.cgi?article=1071&context=etds>

References with no authors

- Every Student Succeeds Act, 20 U.S.C. § 6301. (2015). <https://www.congress.gov/bill/114th-congress/senate-bill/1177>
- World Health Organization (WHO). (2018). *Strategic Guidance on accelerating actions for adolescent Health in South-East Asia Region (2018-2022)*. World Health Organization, Regional Office for South-East Asia.

Websites

Example of listing a website when the author is known:

Strauss, E. (2018, September 20). *Parents, stop feeling so guilty about TV time*. CNN Health. <https://edition.cnn.com/2018/09/20/health/screentime-guilt-parenting-strauss/index.html>

Example of listing a website when the author is unknown:

World Health Organization. (2020, May 1). *Billions worldwide living with herpes*. <https://www.who.int/news-room/detail/01-05-2020-billions-worldwide-living-with-herpes>

If the website does not have an author, the title of the website or paper being cited is provided instead of the author's name.

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