2023 / Vol. 22 / Br. 1

ISSN 1452-7367
eISSN 2406-1328

SPECIJALNA EDUKACIJA I REHABILITACIJA

- SOCIAL ADAPTATION OF HEARING-IMPAIRED ADOLESCENTS
- THE ROLE OF CHILDREN OBSERVERS IN PEER VIOLENCE
- COVID-19 PANDEMIC AND SPEECH-LANGUAGE PATHOLOGY
- NIVO MAJNDFULNESA U INTERPERSONALNIM ODNOSIMA
- SOCIJALNA KOGNICIJA I INTELEKTUALNA OMETENOST

Univerzitet u Beogradu
Fakultet za specijalnu edukaciju i rehabilitaciju

2023 / Vol. 22 / Br. 1

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

University of Belgrade
Faculty of Special Education and Rehabilitation

SPECIJALNA EDUKACIJA I REHABILITACIJA

ISSN 1452-7367
eISSN 2406-1328

UDK 376
COBISS.SR-ID - 136628748

IZDAVAČ
Univerzitet u Beogradu
Fakultet za specijalnu edukaciju i rehabilitaciju
Za izdavača
dr Marina ŠESTIĆ, redovni profesor, dekan

Grafički urednik: Biljana KRASIĆ
Lektura i korektura: Nataša NIKOLIĆ (srpski), Maja IVANČEVIĆ OTANJAC (engleski)
Dizajn korica: Aleksandar LAZAR

Kontakt:
Univerzitet u Beogradu, Fakultet za specijalnu edukaciju i rehabilitaciju
Visokog Stevana 2, 11000 Beograd
tel. +381 11 2030 720
e-adresa: casopis@fasper.bg.ac.rs
URL: https://www.casopis.fasper.bg.ac.rs/index.html

Časopis izlazi četiri puta godišnje.
Indeksirano u: SCIndeks, Scopus, DOAJ
Izdavanje časopisa finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

SPECIAL EDUCATION AND REHABILITATION

ISSN 1452-7367
eISSN 2406-1328

UDK 376
COBISS.SR-ID - 136628748

PUBLISHER
University of Belgrade
Faculty of Special Education and Rehabilitation
For publisher
Marina ŠESTIĆ, PhD, professor, dean

Layout editor: Biljana KRASIĆ
Language editors: Nataša NIKOLIĆ (Serbian), Maja IVANČEVIĆ OTANJAC (English)
Cover design: Aleksandar LAZAR

Contact:
University of Belgrade, Faculty of Special Education and Rehabilitation
Visokog Stevana 2, 11000 Belgrade
tel. +381 11 2030 720
e-address: casopis@fasper.bg.ac.rs
URL: https://www.casopis.fasper.bg.ac.rs/eng/index.html

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.

Sadržaj

Contents

SPECIJALNA EDUKACIJA I REHABILITACIJA
2023, Vol. 22, Br. 1, str. 1-12
UDK: 316.614-056.263(669.1)
Originalan naučni rad
DOI: https://doi.org/10.5937/specedreh22-38708

Social adjustment of adolescents with hearing impairment in Nigeria: Will televised aggression and pornographic addiction mediate?

Samuel O. Adeniyi[a], Olaotan O. Kuku[b]

[a] *University of Lagos, Department of Educational Foundations, Lagos, Nigeria*
[b] *Federal College of Education (Technical), Department of Educational Psychology, Lagos, Nigeria*

Introduction. Living adaptively in any environment depends on several factors ranging from personal to environmental. In the event of development, there is the complexity that globalisation through digitalisation has added to adaptive living among youngsters, especially those living with hearing impairment. *Objectives*. This study investigated the effects of televised aggression and pornographic addiction on social adjustment of adolescents with hearing impairment in two states in South-west Nigeria. *Methods*. The study employed a descriptive survey study of expo facto type. Samples of 118 adolescent students with hearing impairment participated in the study through simple random and purposive sampling techniques. A Social Adaptation Inventory with a reliability of .79 was used to collect data from the respondents. Pearson Product Moment Correlation Coefficient and Multiple Regressions were used to test the hypotheses at .05 level of significance. *Results*. A significant relationship was found between televised aggression and social adjustment problems of adolescents with hearing impairment. Pornographic addiction has a significant relationship with social adjustment of adolescents with hearing impairment. Also, there were joint contributions of televised aggression and pornographic addiction to social adjustment of adolescents with hearing impairment in South-west Nigeria. *Conclusion*. Parents are admonished to monitor their adolescents with hearing impairment in a bid to censor the kinds of television programmes and print media materials they engage in because they also undergo the same developmental process as adolescents without hearing impairment.

Keywords: televised aggression, pornographic addiction, social adjustments, adolescents with hearing impairment

* Correspondence: Olaotan Kuku, kuku.oladele@fcet-akoka.edu.ng, olaotan.kuku@yahoo.com

Introduction

Living well, getting along with members of one's environment as well as behaving adaptively in line with the norms and culture of a particular environment are signs that indicate the ability to adjust and adapt to one's immediate environment. Every member of a particular community is expected to behave according to set rules and regulations and exhibit behaviour that is not injurious to others either socially or psychologically. Any behaviour that adversely affects the wellbeing of any member or a group of people in the environment, and are confirmed by authoritative adults to be inimical to social and psychological stability of others in frequency, timing, age and context of exhibiting, can be linked to adjustment problem from the one that exhibits such behaviour. Hence, the ability to exhibit behaviour that is in line with rules and regulations of a defined society can be seen as social adaptability or adjustment.

This is dependent on modifying factors (such as home, community and peers) interacting with genetic composition of an individual. However, the ecological model premised that the development of children can be understood only in relation to the nature of their interactions with the various environments that impact them and with which they are consistently interacting (Bronfenbrenner, 1979, as cited in Polat, 2003). Thus, social adjustment anchors on consistent interaction with the environment. Good social adjustment is a function of development of expected social skills, which can be described as the ability to understand, accomplish and express the social and emotional aspects of one's life in a way that enables the successful management of life tasks such as learning, forming relationships, solving everyday problems, and adapting to the complex demands of growth and development (Caldarella & Merrell, 1997).

In the view of Idris and Badzis (2017), hearing impairment plays major role in socio-cognitive development and this creates barriers to the general behavioural development of the hearing impaired, bringing about adjustment and personality problems. Hearing impairment is a degree of loss in the audibility range of an individual leading to the inability to comprehend spoken words adequately due to some pathologies in the auditory pathway. Literature has established that children with hearing impairment exhibit different sorts of antisocial behaviours, such as the inability to maintain friendships and failure to establish positive relationship with their peers (Idris & Badzis, 2017), low self-esteem (Adeniyi & Kuku, 2020; Theunissen et al., 2014), aggression (Rostami et al., 2014; Van Gent et al., 2011) and unnecessary anxiety, and sexual risk behaviours among others (Adeniyi & Kuku, 2018; Carr, 1999, as cited in Adeniyi et al., 2021). When an individual exhibits some or all of the behavioural traits above, they may not socially adjust.

Demonstration of social maladjustment behaviours by individuals with hearing impairment has been linked to factors such as hearing impairment, whether in degrees and time of onset of hearing loss (Munoz-Baell & Ruizi,

2000; Sheridan, 2001), communication breakdown due to hearing impairment (Adeniyi & Kuku, 2016; Adeniyi et al., 2021), and possibly parental upbringing and communication (Adeniyi et al., 2018). Evidently, as long as these factors may predict the social adjustment of students with hearing impairment, it is expedient to also investigate some other environmental factors that may possibly distort social adjustment of students with hearing impairment in view of how society is assuming globalisation due to industrial and technological advancement.

Traditionally, individuals with hearing impairment have been viewed from either the medical/audiological or functional perspective (Hoffmeister, 1985, as cited in Polat, 2003). In view of this, the direct effects of deafness have focused on cognitive and communication functioning. The major emphasis by researchers and educators has been the academic achievement, excluding social and psychological development (Greenberg et al., 1985; Luckner, 1991). However, in light of the potential adjustment problems exhibited by many students with hearing impairment, there is a need for researchers to begin to explore the potential impact of the current globalisation through digitisation, looking at the influence on socialisation and adjustment of young adults with hearing impairment. The ecological model premised that the development of children can be understood from the perspective of their interactions with various environments that impinge on them and with which they are consistently interacting (Bronfenbrenner, 1979, as cited in Polat, 2003). It can then be summed up that various socialisation aspects can positively or negatively influence the adjustment of students with hearing impairment.

Globally, one of the agents of socialisation is television. Through various programmes aired every day, television has become the number one past time for children and young adults since its first introduction in 1939 (Kenyon, 2002). According to the study carried out in homes with teenagers under eighteen in the United States by Nielsen Media Research (1998), the average viewing time is 55 hours weekly or about 4/5 hours a day. The implication of this is that television and other audio-visual apparatus have become part of human life with a greater influence on the psychosocial disposition of both young and adults, disabled and non-disabled. Unfortunately, several studies have shown that violence on television has notably increased over the last 25 years (Kenyon, 2002). The implication is that society is increasingly becoming acculturated in to an incredibly violent village. Eremie and Achi (2020) investigated the influence of televised aggression and social adjustment of adolescents in Senior Secondary School in River East Senatorial District of Rivers State, Nigeria. They reported that televised aggression led to behavioural disorders, learning disorders and neurological problems among their participants. Also, a longitudinal study on the relationship between exposure to violent video games on aggressive cognitions and behaviour among 295 German adolescents found

a direct relationship between exposure to violent video games and aggressive cognitions and behaviour (Möller & Krahé, 2009, as cited in Lan et al., 2010). A similar study was carried out by Zulfiqar (2020) on how exposure to violent TV shows, movies, and video games turned people aggressive and desensitized to violence. Using contents analysis, the study reported that excessive exposure to media violence could make the youth less emotional and have a distorted view of real-life violence. This ultimately may change their orientation about aggressive behaviour and have negative and permanent effects on young adults' neurophysiological perspective. From the foregoing, it is evident that televised aggression may change the social adjustment configuration of growing adults be they disabled or non-disabled.

Furthermore, apart from some violent movies, films and programmes via television and other digital apparatus, there are some programmes that may also challenge the adjustment of an individual in a particular environment. Pornography addiction is one of them. Pornography refers to all sexually explicit materials that are capable of distorting the cognition and social behaviour of anybody that engages in the consumption of such information either for pleasure or other reasons best known to the concerned. Löfgren-Mårtenson and Månsson (2010) noted that proliferation and mainstreaming of pornography in the recent years through the internet, television and other digital aid devices have influenced youth culture and their development at an alarming rate. These have indiscriminately aided people of all ages to interact, consume, and distribute some socially and culturally corrupt information such as sexually explicit content. A body of research has shown that these phenomena are increasing among younger generation including students with hearing impairment (Häggström-Nordin et al., 2006; Wolak et al., 2007). Pornographic information through print content, television programmes, and other digital media has been reported to have the capability of increasing some socially unacceptable behaviours linked to adjustment problems such as sexual experimentation, unprotected sexual engagement, rape, withdrawal, unrealistic attitudes towards sex, sleep disorder among others (Setyawati et al., 2020; Siyoto et al., 2018; Tsitsika et al., 2009).

Studies have revealed that pornographic addiction may lead to some socially unexpected behaviours. Lo and Wei (2005) examined the relationship between exposure to sexually explicit materials and sexual behaviours of 2001 Taiwanese adolescents. The finding of the study revealed that exposure to pornographic content increased the potential of permissive sexual behaviour among the participants. Also, Brown and L'Engle's (2009) report indicated that exposure to sexually explicit material increases the likelihood that adolescents will be involved in oral sex and sexual intercourse earlier than their peers that are denied the opportunity (as cited in Owens et al., 2012). In a related study by Mesch (2009) on the implication of pornography on social interaction using a sample of 2004 Israelis aged 13–18, it was reported that adolescents with higher

degrees of social interaction and bonding were not exposed to sexually explicit material as were their peers. Likewise, Setyawati et al. (2020) examined the psychological impact of internet pornography addiction on adolescents and reported that there was a change in cognition among participants, which was clearly reflected in their obsessive-compulsive sexual thought, desire to practice sexual activities, experiencing pleasure after watching pornographic contents, difficulty in maintaining interpersonal relationships and withdrawal tendencies.

Various research findings and literature have then revealed that exposure to explicit sexual content and televised aggression can lead to strain in social relationships and some unacceptable and injurious behaviours among those that have been exposed to it, mostly in non-disabled participants. This study becomes important in view of the paucity of research in this area in Nigeria. This is because adjustment problems among students with hearing impairment have been commonly linked with the degree of hearing impairment, the onset of the hearing loss, negative perception, and poor relationships with parents, peers, and community members. Hence, this study examined the impact of televised aggression and pornographic addiction on social adjustment of adolescents with hearing impairment in two states in the Southwestern part of Nigeria.

Hypotheses

The following hypotheses were tested:

1. There is a significant relationship between televised aggression and social adjustment of adolescents with hearing impairment.
2. Pornographic addiction significantly relates to social adjustment of adolescents with hearing impairment.
3. Televised aggression and pornographic addiction jointly determine social adjustment of adolescents with hearing impairment.

Methods

Design

This study adopted a descriptive survey research design of ex post facto type in order to examine the impact of televised aggression and pornographic addiction on social adjustment of adolescents with hearing impairment in two Southwestern states in Nigeria. The design was adopted because it permits generalizing findings from a representative of the population of the study.

Sample

The study population comprised all students with hearing impairment in the government-owned six Inclusive Senior Secondary Schools in Lagos and two Integrated Secondary Schools in Ogun States. A sample of 118 participants was involved in the study. Simple random and purposive sampling was used to select the participants. Simple

random sampling was used to select four out of the six Inclusive Senior Secondary Schools in Lagos State and one out of the two Integrated Secondary Schools in Ogun State. Purposive sampling was used to select participants who indicated that they loved watching horror films on television, android phones, and in cinemas, and also enjoyed watching pornographic materials. The selection was through a rating scale indicating the frequency of engaging in watching horror films and their love for pornography. The distribution of participants across schools is presented in Table 1.

Table 1

Distribution of participants across states and schools

State	No. of Schools	No. of Selected Schools	Schools	Total	Participants
Lagos	6	4	A	40	18
			B	100	32
			C	22	13
			D	81	27
Ogun	2	1	E	53	28
Total	8	5		296	118

Instruments

An instrument titled Social Adaptation Inventory (SAI), adapted from the Severe Physical Aggression Scale by Huesmann (1977) was used to collect relevant data from the respondents. The SAI has two major sections (A and B). Section A was on demographic information of the respondents, such as gender, age, and the onset of hearing loss. Section B was sub-divided into three sections to collect information on aggression, pornographic addiction, and social adjustment. Each sub-scale contained 15 statements, i.e., a televised aggression scale constructed in a four-point rating scale with levels A lot, Few times, Once, and Never (e.g. "How often have you threatened someone with dangerous materials?"). The pornographic addictions scale constructed in a four-point Likert type rating scale with levels Completely agree, Somewhat agree, Somewhat disagree, and Completely disagree (e.g. "The thought of watching porn makes me sexually aroused.") was adapted from the Pornography Craving Questionnaire by Kraus & Rosenberg, (2014), and social adjustment scale constructed in a four-point rating scale of Always, Sometimes, Rarely and Never (e.g. "Have you felt shy or uncomfortable with people in the last 2 weeks?"), with higher scores denoting greater impairment, was adapted from a social adjustment scale-self-report by Rzepa & Weissman (2014).

The content of items was validated by three researchers in the field of psychometrics. The observations of the resource persons were incorporated, and the SAI was further subjected to test-retest reliability to determine the stability and suitability of the instrument. The trial test of the SAI was conducted in a special school that was not used for the main study. A reliability coefficient of .79 was observed between scores obtained after administering it twice with a two-week interval. The

SAI was administered individually to the subjects by the researchers. This provided the opportunity to clarify terms and ensure a complete response from the respondents. The completed SAIs were collated for data analysis.

Data Analyses

The data collected were analysed using Pearson Product Moment Correlation Coefficient (PPMC) and Multiple Regressions. The hypotheses were tested at .05 level of significance.

Results

Data collected during data administration and analysed were provided in this section. Hypotheses one and two were analysed using PPMC, while hypothesis three was analysed using multiple regression.

Hypothesis 1: There is a significant relationship between televised aggression and social adjustment of adolescents with hearing impairment.

Table 2

Relationship between televised aggression and social adjustment

Variables	*N*	*M*	*SD*	*df*	*r*	*p*
Televised Aggression	118	37.19	6.48	116	.29	.001
Social Adjustment	118	41.79	4.87			

Observation from Table 2 shows that a correlation coefficient (*r*) of .29 was derived as the relationship between televised aggression and social adjustment of adolescents with hearing impairment. It shows that a positive relationship exists between televised aggression and problems of social adjustment of adolescents with hearing impairment. This means that both scores on the televised aggression and social adjustment scales rise or fall together. Consequently, the first hypothesis was confirmed, and it was concluded that there was a significant and positive relationship between televised aggression and social adjustment problems of adolescents with hearing impairment.

Hypothesis 2: Pornographic addiction significantly relates to social adjustment of adolescents with hearing impairment.

Table 3

Relationship between pornographic addiction and social adjustment

Variables	*N*	*M*	*SD*	*df*	*r*	*p*
Pornographic Addiction	118	39.74	9.41	116	.49	<.001
Social Adjustment	118	41.79	4.87			

A correlation coefficient (*r*) of .49 ($p < 0.05$) was derived as the relationship between pornographic addiction and social adjustment. This shows a positive relationship between pornographic addiction and social adjustment problems of

adolescents with hearing impairment. By implication, a change in pornographic addiction, which may be a rise or fall, will lead to a significant similar change in social adjustment problems of adolescents with hearing impairment.

Hypothesis 3: Televised aggression and pornographic addiction jointly determine social adjustment of adolescents with hearing impairment.

A multiple regression analysis computed shows that a multiple correlation coefficient (*R*) of .49 was derived. This shows that almost a quarter of the variance of social adjustment problems of adolescents with hearing impairment could be explained by two predictors ($R^2 = .24$). Such a result was highly significant ($F = 18.20$, $df1 = 2$, $df2 = 115$, $p < .01$).

Table 4

Relative Effect on Social Adjustment

Variables	*B*	*SE*	β	*t*	*p*
Televised Aggression	-0.05	0.08	-0.07	-0.59	.556
Pornographic Addiction	0.28	0.06	0.53	4.84	< .001

However, as indicated by the results presented in Table 4, only pornographic addiction had a significant partial contribution to the explanation of the criterion variable ($\beta = .53$, $p < .001$), while this was not the case with televised aggression ($\beta = -.07$, $p = .556$).

Discussion

The findings from the study revealed that there was a significant and positive relationship between televised aggression and social adjustment problems of adolescents with hearing impairment. From the result, it can be inferred that adjustment problems of individuals with hearing impairment result not only from hearing loss problems, lack of adequate communication because of poor language development, degree and onset of hearing, poor self-esteem, but can also be influenced by watching some programmes and films that depict aggression from television and some digitalised media. From the social learning theory of Albert Bandura, human beings learn mostly from what they observe and interact with (Bandura, 1986). The outcome of this study is in line with Möller and Krahé's (2009) findings that revealed a direct relationship between exposure to violent video games and aggressive behaviour of their participants (as cited in Lan et al., 2010). Also, Zulfiqar (2020) reported that excessive exposure to media violence could make the youth less emotional and cause the distortion of real-life violence, which ultimately may change their orientation about aggressive behaviour and have negative and permanent effects on young adults' neurophysiological perspective. This indicates that aggression may be a learnt behaviour which may not be a result of pathology or deficiency resulting from disabilities.

Furthermore, the study found that pornographic addiction has a significant and positive relationship with social adjustment problems of adolescents with hearing impairment. This finding lends credence to the fact that adolescents with hearing impairment, like any other adolescents, have feelings and are sexual. Watching pornography and being addicted to it may distort their developmental process, thereby causing adjustment problems for them. The outcome of this study corroborated Setyawati et al. (2020), who reported that there was a change in cognition among participants, which was clearly reflected in their obsessive-compulsive sexual thought, desire to practice sexual activities, experiencing pleasure after watching pornographic content, difficulty in maintaining interpersonal relationships and withdrawal tendencies. It is worth noting that engagement and being addicted to pornography can affect one's social orientation, thereby leading to poor social adjustment.

In addition, the study further revealed the joint contributions of televised aggression and pornographic addiction to social adjustment problems of adolescents with hearing impairment in Nigeria. The joint influence of the two variables buttresses the fact that poor social adjustment in the form of demonstration of aggression, unnecessary anxiety, withdrawal, poor self-concept, lack of interpersonal relation, sexual experimentation and escapades and host of others can also be linked with pornography and televised aggression, as the results of this study have revealed. This finding corroborated previous studies on the impacts of pornographic addiction and televised aggression as revealed by various studies (Möller & Krahé, 2009, as cited in Lan et al., 2010; Setyawati et al., 2020; Zulfiqar, 2020). We can therefore affirm that both pornographic addiction and televised aggression are powerful tools that can aid poor social adjustment of adolescents with hearing impairment in Nigeria.

Conclusion

This study is on the impact of televised aggression and pornographic addiction on social adjustment of adolescents with hearing impairment in Nigeria. The findings revealed that there is a significant correlation between televised aggression and pornographic addiction on the participants' social adjustment, and that there were joint contributions of the two variables to their social adjustment problems. This leads to a change of focus from some psychological and pathological conditions to a developmental and digital revolution within the sociological context of the participants.

Recommendations

The contents to be consumed by adolescents on television and print media should be adequately monitored to avoid the perversions that have influenced the social life of the youth across the globe. Parents also need to monitor their

adolescent children with hearing impairment in a bid to censor the kind of television programmes and print materials they are exposed to because these youth also undergo the same developmental process as adolescents without hearing impairment. Government should empower the censor board to sanction any media outfit that goes contrary to the ethos of morality and public regulation.

References

Adeniyi, S. O., & Kuku, O. O. (2016). Personal-social factors as correlates of school interest among adolescent with hearing impairment in Lagos State, Nigeria. *The Lagos Counsellor*, *9*(1), 11-26.

Adeniyi, S. O., & Kuku, O. O. (2018). Psychosocial predictors of sexual experimentation among adolescents with hearing impairment in Lagos State. *UNESWA Journal of Education*, *1*(2), 234-245.

Adeniyi, S. O., & Kuku, O. O. (2020). Impact of Montessori didactic method and direct instruction method on self-esteem of pupils with hearing impairment in Lagos State. *Belgrade School of Special Education and Rehabilitation*, *26*(3), 21-37.

Adeniyi, S. O., Olufemi-Adeniyi, O. A., & Raheem, A. W. (2021). Efficacy of cognitive therapy on the management of psychological distress among adolescents with hearing impairment in Oyo State. *International Journal of Special Education*, *36*(2), 90-97. https://doi.org/10.52291/ijse.2021.36.21

Adeniyi, S. O., Raheem, A. W., & Olufemi-Adeniyi, O. A. (2018). Psychological distress among adolescents with hearing impairment: The predictive strength of gender, degree of hearing loss, school type and parents' communication competence. *Belgrade School of Special Education and Rehabilitation*, *24*(3), 35-52.

Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory*. Prentice-Hall.

Caldarella, P., & Merrell, K. W. (1997). Common dimensions of social skills of children and adolescence: A taxonomy of positive behaviors. *School Psychology Review*, *26*(2), 265-279. https://doi.org/10.1080/02796015.1997.12085865

Eremie, M., & Achi, J. N. (2020). Influence of televised aggression and social adjustment of adolescents in senior secondary school in Rivers State. *International Journal of Advanced Academic and Educational Research*, *13*(4), 55-67.

Greenberg, M. T., Kusché, C. A., Gustafson, R. N., & Calderon, R. (1985). The PATHS project: A model for prevention of psychosocial difficulties in deaf children. In G. B. Anderson, & D. Watson (Eds.), *Habitation and rehabilitation of deaf adolescents* (pp. 243-263). Galladuate College Press.

Häggström-Nordin, E., Sandberg, J., Hanson, U., & Tydén, T. (2006). "It's everywhere!" Young Swedish people's thoughts and reflections about pornography. *Scandanavian Journal of Caring Science*, 20, 386-393. https://doi.org/10.1111/j.1471-6712.2006.00417.x

Huesmann, R. L. (1977). *Severe Physical Aggression scale: PHYSAGG*. University of Michigan.

Idris, G. R., & Badzis, M. (2017). Interpersonal behavioural problems in children with hearing impairment: The parental experiences and coping strategies. *International Journal of Education and Research*, *5(*10), 223-236.

Kenyon, B. J. (2002). *The effects of televised violence on students* [Master's thesis, Grand Valley State University]. ScholarWorks@GVSU. https://core.ac.uk/download/pdf/19980213.pdf

Kraus, S., & Rosenberg, H. (2014). The Pornography Craving Questionnaire: Psychometric properties. *Archives of Sexual Behavior*, *43*, 451-462. https://doi.org/10.1007/s10508-013-0229-3

Lan, K. L., Abdullah, M. C., & Roslan, S. (2010). Understanding media violence and the development of aggressive behaviour of school children. *Procedia Social and Behavioral Science*, *7*(C), 522-527. https://doi.org/10.1016/j.sbspro.2010.10.070

Lo, V.-H., & Wei, R. (2005). Exposure to internet pornography and Taiwanese adolescents' sexual attitudes and behavior. *Journal of Broadcasting and Electronic Media*, *49*(2), 221-237. https://doi.org/10.1207/s15506878jobem4902_5

Luckner, J. L. (1991). Promoting the affective development of students with hearing impairments. *ACEHI Journal*, *17*(2), 77-87.

Löfgren-Mårtenson, L., & Månsson, S.-A. (2010). Lust, love, and life: A qualitative study of Swedish adolescents' perceptions and experiences with pornography. *Journal of Sex Research*, *47*(6), 568-579. https://doi.org/10.1080/00224490903151374

Mesch, G. S. (2009). Social bonds and Internet pornographic exposure among adolescents. *Journal of Adolescence*, *32*(3), 601-618. https://doi.org/10.1016/j.adolescence.2008.06.004

Munoz-Baell, I. M., & Ruiz, M. T. (2000). Empowering the deaf: Let the deaf be deaf. *Journal of Epidemiology and Community Health*, *54*(1), 40-44. https://doi.org/10.1136/jech.54.1.40

Nielsen Media Research. (1998). *Nielsen Report on television*. AC Nielsen Company.

Owens, E. W., Behun, R. J., Manning, J. C., & Reid, R. C. (2012). Impact of internet pornography on adolescents: A review of research. *Sexual Addiction & Compulsivity*, *19*(1-2), 99-122. https://doi.org/10.1080/10720162.2012.660431

Polat, F. (2003). Factors affecting psychosocial adjustment of deaf students. *Journal of Deaf Studies and Deaf Education*, *8*(3), 325-339. https://doi.org/10.1093/deafed/eng018

Rostami, M., Bahmani, B., Bakhtyari, V., & Movallali, G. (2014). Depression and deaf adolescent: A review. *Iranian Rehabilitation Journal*, *12*(1), 43-53.

Rzepa, S. R., & Weissman, M. M. (2014). Social Adjustment Scale-Self Report (SAS). In A. Michalos (Ed.), *Encyclopedia of quality of life and well-being research* (pp. 6017-6021). Springer.

Setyawati, R., Hartini, N., & Suryanto, S. (2020). The psychological impacts of internet pornography addiction on adolescents. *Humaniora*, *11*(3), 235-244. https://doi.org/10.21512/humaniora.v11i3.6682

Sheridan, M. (2001). *Inner lives of deaf children: Interviews and analysis*. Gallbudet University Press.

Siyoto, S., Dwianggimawati, M. S., Wahyu, A. S., Sari, D. K., Mufida, R. T., & Sodik, M. A. (2018). The effect of pornography accessibility on sexual behaviour. *India Journal of Public Health Research and Development*, *9*(12), 1477-1481.

Theunissen, C. P. M., Rieffe, C., Netten, A. P., Briaire, J. J., Soede, W., Kouwenberg, M., & Frijns, J. M. H. (2014). Self-esteem in hearing-impaired children: The influence of communication, education and audiological characteristics. *PLoS One*, *9*(4), Article e94521. https://doi.org/10.1371/journal.pone.0094521

Tsitsika, A., Critselis, E., Kormas, G., Konstantoulaki, E., Constantopoulos, A., & Kafetzis, D. (2009). Adolescent pornographic Internet site use: A multivariate regression analysis of the predictive factors of use and psychosocial implications. *Cyberpsychology and Behavior*, *12*(5), 545-550. https://doi.org/10.1089/cpb.2008.0346

Van Gent, T., Goedhart, A. W., & Treffers, P. D. (2011). Self-concept and psychopathology in deaf adolescents: Preliminary support for moderating effects of deafness-related

characteristics and peer problems. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *52*(6), 720-728. http://dx.doi.org/10.1111/j.1469-7610.2011.02392.x

Wolak, J., Mitchell, K., & Finkelhor, D. (2007). Unwanted and wanted exposure to online pornography in a national sample of youth Internet users. *Pediatrics*, *119*(2), 247-257. https://doi.org/10.1542/peds.2006-1891

Zulfiqar, S. H. (2020). *Does media violence cause violence? Can exposure to TV shows, movies and video games turn people aggressive and desensitised to violence?* Eliva Press.

Socijalna prilagođenost adolescenata sa oštećenjem sluha u Nigeriji: Da li će posredovati agresivni sadržaji na televiziji i zavisnost od pornografije?

Samuel O. Adeniyi[a], Olaotan O. Kuku[b]

[a] *Univerzitet u Lagosu, Departman za osnove obrazovanja, Lagos, Nigerija*

[b] *Federalni koledž za obrazovanje (Tehničko), Departman za psihologiju obrazovanja, Lagos, Nigerija*

Uvod: Prilagođeno življenje u bilo kojoj sredini zavisi od nekoliko faktora, u rasponu od ličnih do sredinskih. Kada se radi o razvoju, postoji složenost koju je globalizacija kroz digitalizaciju dodala adaptivnom življenju mladih, posebno onih sa oštećenjem sluha. *Ciljevi:* Ova studija je istraživala efekte izloženosti agresivnim sadržajima na televiziji i zavisnosti od pornografije na socijalnu prilagođenost adolescenata sa oštećenjem sluha u dve države u Jugozapadnoj Nigeriji. *Metode:* U studiji je korišćena deskriptivna anketa expo facto tipa. Uzorak od 118 učenika adolescentnog uzrasta sa oštećenjem sluha učestvovao je u istraživanju putem tehnika jednostavnog nasumičnog i prigodnog uzorkovanja. Za prikupljanje podataka od ispitanika korišćen je Inventar socijalne prilagođenosti sa relijabilnošću od .79. *Pirsonov* produkt-*moment koeficijent* korelacije i višestruka regresiona analiza korišćeni su za testiranje hipoteza na nivou značajnosti .05. *Rezultati:* Utvrđeno je da postoji značajna povezanost između izloženosti agresivnim sadržajima na televiziji i problema socijalnog prilagođavanja adolescenata sa oštećenjem sluha. Postoji značajna povezanost između zavisnosti od pornografije i socijalnog prilagođavanja adolescenata sa oštećenjem sluha. Takođe, postoji zajednički doprinos izloženosti agresivnim sadržajima na televiziji i zavisnosti od pornografije socijalnom prilagođavanju adolescenata sa oštećenjem sluha u Jugozapadnoj Nigeriji. *Zaključak:* Roditeljima se savetuje da nadziru adolescente sa oštećenjem sluha kako bi cenzurisali sadržaje televizijskih programa i štampanih medijskih materijala kojima se bave, jer i oni prolaze kroz isti razvojni proces kao adolescenti bez oštećenja sluha.

Ključne reči: agresivni sadržaji na televiziji, zavisnost od pornografije, socijalna prilagođenost, adolescenti sa oštećenjem sluha

PRIMLJENO: 18.06.2022.
REVIDIRANO: 08.09.2022.
PRIHVAĆENO: 17.10.2022.

SPECIJALNA EDUKACIJA I REHABILITACIJA
2023, Vol. 22, Br. 1, str. 13-30

UDK: 316.624-053.4
Originalan naučni rad
DOI: https://doi.org/10.5937/specedreh22-37740

Perceptions of preschool teachers and parents about the role of children observers in peer violence

Miroslava B. Kojić[a], Zagorka T. Markov[b], Smiljana S. Kojić Grandić[c,d]

[a] *European Academy of Sciences, Belgrade, Serbia*
[b] *Preschool Teacher Training College of Applied Studies in Kikinda, Kikinda, Serbia*
[c] *Elementary School "Jovan Popović", Kikinda, Serbia*
[d] *Elementary School "Đura Jakšić", Kikinda, Serbia*

Introduction. Peer violence impacts the development of children who are victims of violence, but children who witness violence are also prone to experience consequences pertaining to their socio-emotional development. The state should provide dedicated support to intervention programmes in preschool institutions aimed at preventing and suppressing peer violence, which would focus on children who are witnesses, i.e., observers of violence. *Objectives.* This research was aimed at analysing the perceptions of preschool teachers and parents about the role of children observers in peer violence. *Methods.* The sample consisted of preschool teachers employed in preschool institutions in several cities in Serbia (n = 104) and parents whose children attended preschools (n = 84). For the purposes of the research, an adapted Likert-type scale was used, which assessed the role of children "observers" of peer violence and the possibilities of developing support programmes for children exposed to violence. The instrument was developed based on a pilot study on the role of children observers in bullying. *Results.* Research results showed that the perceptions of parents pertaining to the role of children observers in peer violence were statistically significantly different in relation to the opinions of preschool teachers. Parents believed that children who were observers of peer violence were not sufficiently involved in intervention programmes for the prevention and suppression of peer violence in preschool institutions. *Conclusion*. These findings have significant practical implications for the planning of initiatives in preschool institutions aimed at fostering a supportive environment in which children who witness peer violence would play a prominent role.

Keywords: peer violence, children observers, preschool teachers, parents

* Correspondence: Miroslava Kojić, kojicmb@gmail.com

Introduction

Peer violence is influenced by a number of crucial elements, including declining social values, social stratification, low socioeconomic level of families, weakened societal resistance to different harmful occurrences, etc. Programme designs based on children's prosocial behaviour (Jevtić, 2017) should be developed in preschool institutions (Kojić & Markov, 2011). Fostering empathy, tolerance, generosity, and other such qualities in preschool children who observe peer violence would undoubtedly help to shift the balance of power between the bullied child and the bully (Popadić, 2009) because the observers of peer violence also have the ability to protect victimized children (Marković & Trifunović, 2017).

Traditional social roles can already be observed in preschool children, namely the roles of violence perpetrator, victim, aggressive victim and observer. There are some observable traits that lead to the child adopting the role of victim or abuser. The reaction of the educational group that does not directly participate in the act of violence significantly contributes to the dynamics of social interactions. In preschool children, the consequences of peer violence have long-lasting effects and reflect poorly on their psychosocial development (Glumbić & Žunić-Pavlović, 2008). Preschool is the most crucial developmental stage, and during this time, children acquire and practice skills like self-control, patience, and the ability to postpone the gratification of their needs; however, this is the period when they also start to exhibit negative behaviours (Waksclag et al., 2005, as cited in Žunić-Pavlović & Kovačević-Lepojević, 2011). The preschool teacher, expert associates in preschools and parents should note whether the development of self-control follows the desired course, in order to aid in the suppression of problematic behaviours and prevention of peer violence. Manifestation of externalizing behavioural problems (aggression, destructiveness, etc.) may be related to peer violence (Gašić-Pavišić, 2004). When discussing pedagogical preventive support interventions related to the suppression of violent behaviour in preschool, it is necessary to include children observers, families, well-trained preschool teachers and expert associates, etc. Peer aggression could be prevented and suppressed by the cooperative and synergistic effect of these factors, and all children would get a chance to grow and develop in a supportive social and emotional environment, to which they unquestionably have a right (Kojić & Markov, 2011).

In addition to violence perpetrators and victims, there are several types of observers of peer violence a) those who join the perpetrator; b) supporters – who provide support but refuse to participate; c) passive supporters – they enjoy the violence but do not demonstrate open support; d) uninvolved observers, potential protectors – do not approve of the violence but fail to do anything about it; and e) protectors (Olweus et al., 1999, as cited in Plut & Popović, 2007; Sesar, 2011). At preschool age, children encounter violence among peers outside

the family environment for the first time. In preschools, they enter a peer group wherein they engage in social interactions and activities in which, as recent studies have shown, preschool children are becoming increasingly violent (Kraljic Babić & Vejmelka, 2015).

Preschool violence has unique characteristics that require deliberate treatment and prevention steps. Even a low level of exposure to community violence increases the risk of children behaving more aggressively (Bradshaw et al., 2009). It is crucial to stress that, in the circle of violence, children are not just the victims, i.e., the vulnerable ones, or the attackers, i.e., the ones that initiate violence and aggression, but also witnesses – observers. This is the third group of children who indirectly participate in a violent act. They sometimes help and encourage the person who initiated the abuse. They may even join the bullies out of fear in order to protect themselves. Children who witness violence are insecure and frightened, and they are likely to submit to the bully in order to feel safer. They fear that they may potentially become victims in the future, so even though they may sympathize with the victims of bullying, they are also displeased that they are unable to help. Violence creates an atmosphere of fear in which children may become insecure. Bullying is like a theatre performance. There is always a stage on which the victim and the bully take centre place, and there is also an audience (Buljan-Flander, 2003, as cited in Zrilić, 2006). Victims and observers of violence largely believe that school allows aggression, and that teachers and peers will do nothing to stop the violence, which discourages them from seeking help (Pečjak & Pirc, 2017). The results of one study showed that there are significant differences in the perception of violence among adolescents (Skočajić & Stojanović, 2019). Behaviour that can be classified as violence under social and legal norms, they view more as "friendly teasing" in which the roles of the bully and the victim are often interchangeable. Other factors that contribute to this situation include the lack of faith in school authorities, the idea that bullies will not be punished, etc.

A comprehensive approach to peer violence in which children observers would also play a role, and the outcome of which would be the establishment of a supportive atmosphere in the educational group, would contribute to breaking the cycle of peer violence (Lindstrom Johnson et al., 2013). According to a survey conducted in Australian primary and secondary schools on a sample of 400 students who were shown videos depicting violence and asked to react as observers, about 50% of respondents said they would directly assist the victims of violence, while a small percentage said they would report the violent incidents to teachers or assist the perpetrator of violence (Rigby & Johnson, 2005). Such findings should encourage experts to develop new strategies that would include violence observers in intervention programmes for the prevention and suppression of peer violence as important participants in this process. These strategies could then be included into a wide range of preventive

and intervention initiatives and activities aimed at stopping peer aggression (Marković, 2017; Pavlović & Žunić-Pavlović, 2008).

Research Aim

The main aim of the research was to analyse the views of preschool teachers and parents on the role of children observers in peer violence and to determine whether the perceptions of preschool teachers and parents differ when it comes to general issues related to peer violence, the behaviour of children observers during peer violence in preschools, and the role of preschool teachers and family members in programmes aimed at preventing and suppressing peer violence.

Methods

Sample

The sample of respondents consisted of preschool teachers (n = 104) employed in seven preschool institutions in the territory of the Republic of Serbia, and parents of preschool children (n = 84) whose children attended preschool during the 2018/19 school year. The total number of female respondents was 178 (94.7%), while 10 respondents (5.3%) were male. Demographic information of preschool teachers and parents is presented in Table 1 and Table 2, which refer to gender, age, length of service, place of employment or place of preschool attended by children.

Table 1

General data on the respondents – Preschool teachers

Variable	Group	*N*	*%*
Gender	Male	7	6.7
	Female	97	93.3
Age	25-35 yrs.	27	25.9
	36-45 yrs.	45	43.3
	45-56 yrs.	32	30.8
Place of employment	Belgrade	16	15.4
	Kikinda	39	37.5
	Novi Bečej	10	9.6
	Novi Sad	4	3.9
	Pančevo	24	23.1
	Zrenjanin	11	10.5
Work experience	2-10 yrs.	22	21.2
	11-25 yrs.	54	51.9
	26-35 yrs.	28	26.9

Table 2

General data on respondents – Parents

Variable	Group	*N*	*%*
Gender	Male	3	3.6
	Female	81	96.4
Age	25-35 yrs.	46	54.8
	36-40 yrs.	30	35.7
	41-45 yrs.	8	9.5
Preschool institution attended by children	Belgrade	13	15.5
	Kikinda	36	42.9
	Novi Bečej	8	9.5
	Novi Sad	1	1.2
	Pančevo	21	25.0
	Zrenjanin	5	5.9
Employment	Employed	41	48.8
	Temporarily employed	27	32.1
	Unemployed	16	19.1

Children whose parents participated in the research were aged five to seven. The mean chronological age of preschool teachers was 40.05 years (*SD* = 7.05), and their mean service length was 11.64 years (*SD* = 6.25). The average age of the parents was 28.48 (*SD* = 4.75).

Instruments

A five-point Likert-type assessment scale was created for the purposes of this research. The introduction to the instrument included pertinent demographic information about the respondents, including their location of residence, gender, age, and the preschool institution where they work.

The main part of the instrument consisted of three subtests: a) General Issues About the Role of Observers in Violence (GI) – which examined the general views of the respondents on the possibilities of including children observers in the prevention of peer violence; b) Behaviour of Children "Observers" During Peer Violence (BC) – which examined the behaviour of children who were bystanders, e.g. whether they reported violence to their parents or teachers, etc.; and c) Role of Preschool Teachers and Parents in Pedagogical Programmes Aimed at Preventing and Suppressing Violence in Preschool Institutions (RTEP) – which examined the participation of preschool teachers and parents in terms of planning initiatives in which children observers would become a significant resource in the suppression of peer violence. The scale included 34 statements, and respondents indicated their level of agreement by selecting one of the following choices: (1) Strongly disagree (2) Disagree (3) Neither agree nor disagree (4) Agree (5) Strongly agree. The version of

the questionnaire for parents was adjusted in the part that refers to the demographic information.

An open-ended interview was used in a pilot study on a sample of 19 preschool teachers before the final list of statements was drafted (Markov, 2019). The instrument used in this research showed good reliability and internal consistency in the analysed sample ($\alpha = .82$, $ICC = .79$).

Data and Statistical Processing

The information gathered by the questionnaire was based on the applied model with three subscales, which was condensed so that average scores for each respondent could be calculated by adding up the responses to the items and calculating summary scores for the subscales. The following descriptive statistics were calculated: arithmetic mean, standard deviation, minimum and maximum value – separately for the groups of preschool teachers and parents, for the variables defined as: a) General Issues (GI); b) Behaviour of Children (BC); and c) Role of Preschool Teachers, Expert Associates and Parents (RTEP). The Kolmogorov-Smirnov test was used to determine whether the distribution of the defined variables was normal. The reliability and internal consistency of the applied questionnaire were checked by determining the Cronbach's alpha coefficient (α) and intraclass correlation coefficient (ICC). The Mann–Whitney U test was used to analyse group differences because the data distributions for all three variables deviated considerably from a normal distribution. Eta (η^2) was calculated to determine the magnitude of the effect.

The level of $p \leq .05$ was used to determine the statistical significance of all applied tests. IBM SPSS 20.0, a statistical software, was used to process the data.

Results

The platykurtic distribution of scale scores in the study variables in both groups of respondents who provided responses reflects the current heterogeneity of the component parts of attitudes (Table 3). This is particularly evident in the variables BC and RTEP for the group of preschool teachers, whereas it is apparent in the variable RTEP for the group of parents. With the exception of the variable BC for preschool teachers, there is a considerable deviation from the normal distribution in the distribution of scores in both subsamples of the variables under analysis (significance of the K-S test).

Table 3

The basic statistics of scale scores for the variables, for preschool teachers and parents

Group	Variable	*Min*	*Max*	*Mean*	*SD*	*Sk*	*Kk*	*K-S Z (p)*
Teachers (n = 104)	GI	1.89	3.67	2.94	0.56	-0.87	-0.48	1.98 (.001)
	BC	2.87	3.75	3.13	0.62	0.08	-1.81	2.22 (< .001)
	RTEP	2.00	3.89	2.91	0. 71	0.19	-1.56	2.35 (< .001)
Parents (n = 84)	GI	2.89	3.67	3.20	0.18	0.04	-0,32	1.49 (.024)
	BC	3.00	3.94	3.47	0.24	0.01	-0.39	1.04 (.230)
	RTEP	3.11	3.89	3.54	0.25	-0.38	-1.28	2.60 (< .001)

Note. GI – General Issues, BC – Behaviour of Children, RTEP – Role of Preschool Teachers, Expert Associates and Parents, K-S – Kolmogorov–Smirnov Z-statistic test

Testing the significance of differences between the views of preschool teachers and parents concerning the three defined variables was done by using the Mann–Whitney test (Table 4). A statistically significant difference in the level of significance of $p = 0.01$ was found in all three variables. A large effect of differences was found in variables BC ($\eta^2 = 17.6\%$) and RTEP ($\eta^2 = 14.5\%$), while the group effect was smaller when it comes to variable GI ($\eta^2 = 4.1\%$).

Table 4

Results of the Mann-Whitney test comparing the scale scores of preschool teachers and parents

Variables	Group	*MR*	*Z*	*p*	η^2
GI	Teachers	84.86	-2.74	.006	.041
	Parents	106.43			
BC	Teachers	74.09	-5.75	.001	.176
	Parents	119.77			
RTEP	Teachers	76.18	-5.21	.001	.145
	Parents	117.18			

Note. MR – mean rank; Z – value of Z; p – significance of Z; η^2 – effect size; GI – General Issues; BC – Behaviour of Children; RTEP – Role of Preschool Teachers, Expert Associates and Parents

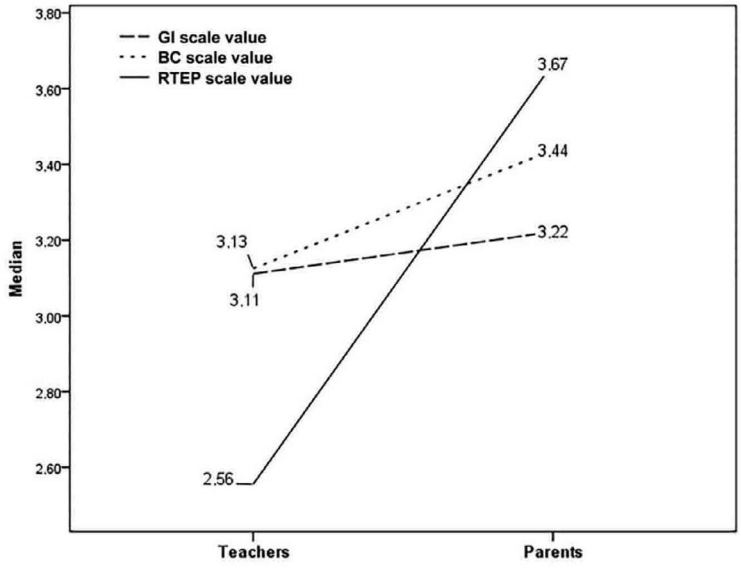
In the GI subtest, both groups of respondents agreed that children observers did not receive clear instructions on how to behave when they become involved in peer violence. There is no statistically significant difference in the views of preschool teachers and parents when it comes to the provision of clear

guidance on the options that are available to children in the prevention and suppression of peer violence ($Z = 2.74$, $p > .05$). In this subtest, statistically significant differences were observed between parents and preschool teachers in the following claims: *Preschool teachers help develop the awareness of children that they can confront bullies* ($Z = 5.44$, $p < .001$). Over 50% of parents did not express agreement with this claim. Also, over 50% of parents disagreed that *Preschool teachers encourage children to report violence* ($Z = 5.18$, $p < .001$). The highest percentage of parents (54.3%) disagreed with the assertion that *Preschool teachers respond adequately to reported peer violence* ($Z = 5.11$, $p < .001$).

In the BC subtest, statistically significant differences were found between parents and preschool teachers ($Z = 5.75$, $p < .001$). In the RTEP subtest, the views of preschool teachers and parents demonstrated statistically significant differences ($Z = 5.21$, $p < .001$). The majority of parents (58.1%) believe that preschool institutions fail to organize adequate training for preschool teachers and parents focusing on children observers as a possible resource for the suppression of peer violence. By analysing the results of this subtest, which examines the participation of preschool teachers and parents in the planning of initiatives in which children would be given a role of significant participants in the suppression of peer violence, preschool teachers believe that parents should inform them about every act of peer violence they learn about from their children.

Figure 1

Comparative review of the median values for preschool teachers and parents in the analysed variables



The majority of preschool teachers (54.2%) believe that parents fail to respond adequately when their children complain about peers who are exposed to violence.

In comparison with preschool teachers, parents showed significantly higher median values and average ranks across all three variables (Figure 1).

Discussion

The main aim of this paper was to investigate how preschool teachers and parents view the role of children observers in the prevention and suppression of peer violence in the educational group. The paper focused on the following issues: a) whether there are differences in the views of preschool teachers and parents when it comes to general issues related to the role and resources of violence observers as a factor of violence prevention/victim support (GI); b) how preschool teachers and parents view the behaviour of children – observers of peer violence (BC); c) whether educational practitioners and parents work on the development of intervention initiatives to combat peer violence that focus on children observers (RTEP).

The research results for all three subscales show that a much higher percentage of parents than preschool teachers perceive those children observers are insufficiently involved in programmes of peer violence prevention and suppression. Parents think that preschool teachers fail to recognise the roles that preschool children play in peer violence because they are insufficiently competent for this type of assessment and because the behaviour of children generally depends on family upbringing.

Also, the majority of parents (58.2%) believe that it is best for their children to stay away from situations in which other children are exposed to peer violence. Therefore, preschool institutions ought to cooperate with families (Fantuzzo et al., 2000) in involving children observers as a resource that has gone largely underused thus far in establishing a positive psychosocial atmosphere in the educational group, as indicated by the findings of countless studies (Low & Van Ryzin, 2014; Marković, 2017; Olweus, 1998; Velki & Ozdanovac, 2014). In contrast to preschool teachers, parents perceive that they are insufficiently included in programmes aimed at preventing and suppressing peer violence. Parents are of the opinion that preschool teachers do not have elaborate intervention programmes at their disposal, in which children observers would have a significant role, e.g., the role in which they would be able to provide assistance or support to a child who was a victim of violence. The role of assistant can be assigned to a child observer previously instructed on the provision of support to other children – victims of peer violence (Olweus, 1998), i.e., this role could resemble the role of peer counsellor/mentor (Salmivalli, 1999, as cited in Marković, 2017).

The findings of this research indicate that the support of other children can come from the ranks of children in the educational group who were previously instructed on the ways in which they can offer help and support to peers who experienced violence. Similar conclusions can be found in other studies as well (e.g., Marković, 2017; Olweus, 1998; Pečjak & Pirc, 2017). Adults can also serve as coordinators in the implementation of preventive interventions where efforts are being made to bolster the strengths of children helpers and highlight the importance of this group – which is the most numerous and able to provide support – with the right guidance in the fight against peer aggression. It is also feasible to involve an adult in this process, who would work with the child helper, and experience has shown that this tactic has beneficial results. Research by other authors has also pointed to comparable results (Marković, 2017; Olweus, 1998; Low & Van Ryzin, 2014).

Based on their expertise and professional skills, preschool teachers who participated in the research believe they can identify children who are "victims," "bullies", and "observers" of peer aggression. Additionally, they participated in countless training programmes aimed at acquiring competencies necessary for the suppression of peer violence. In accordance with the *Rulebook on the Continuous Professional Development and Career Promotion of School Teachers, Preschool Teachers and Expert Associates* ("Official Gazette of the Republic of Serbia," no. 109/21), preschool teachers are required to acquire professional competencies that apply to the field of peer violence, among other things. Furthermore, research demonstrates that preschool teachers are members of the team that aids in the prevention of both externalizing (which is consistent with the findings of the study by Opić & Jurcević-Lozancić, 2008) and internalizing problems in children, and in the context of the expert team, they are viewed as qualified to evaluate the role of children in peer violence.

The findings of our research demonstrate that preschool teachers believe that peer violence prevention and suppression programmes are implemented in preschool institutions. These programmes are based on improving the social climate in the educational group, which is consistent with the results of the study by Olweus (1998). Through play, theatrical performances, and stories about violence, preschool institutions encourage children to think about the distinct roles in peer violence and ways in which they can help and offer support to children who are exposed to violence.

According to some authors, preschool teachers should encourage pro-social behaviour, altruism, and tolerance in children whom they have observed to exhibit empathy in order to be able to protect victims of peer violence more efficiently (Cowie & Olafsson, 2000; Kojić & Markov, 2011; Menesini et al., 2003).

Children who observe peer violence have the capacity to stop the violence. Since children are a part of the peer group and have a more thorough

understanding of the frequency and severity of violence, they are more able to recognize peer violence than adults. Compared to adults, they have a considerably greater understanding of how peers interact. However, children observers, as perceived by the parents in our research, need the support of preschool teachers, which is often lacking. These findings are consistent with the results of a study conducted on a sample of 414 students, showing that the largest percentage of respondents believe that teachers rarely responded to allegations of peer aggression, which discouraged victims from reporting the abuse (Pečjak & Pirc, 2017; Skočajić & Stojanović, 2019).

Participants in this study, including both preschool teachers and parents, agree with the findings of other studies that children who are victims of peer aggression can be helped by children observers who are well-positioned in the educational group, pro-socially inclined, empathetic, and tolerant (Kojić & Markov, 2011; Markov, 2019). Studies reveal that while some of them are motivated to assist, they frequently resort to the preschool teacher to protect the child before going to their parents (Cowie & Jennifer, 2008; Kojić & Markov, 2011). According to parents, children should be taught that they can oppose bullies by banding together and making a concerted effort, which is consistent with the findings of the study conducted by Marković (2014). In line with the findings of the Nishina & Juvonen study (2005), parents believe that the majority of children who witness violent acts find their involvement to be extremely stressful and that it has a negative impact on their behaviour and development. On the other hand, preschool teachers have observed that children who witness peer aggression rapidly return to their regular preschool activities without consequences. Preschool teachers have noted that children acting as observers typically do not experience any inconvenience as a result of reporting peer violence. They continue behaving as usual after describing peer violence, they have acquired socio-emotional skills, they are responsible and empathetic, which is similar to the findings of Ahmed's study (2005), and they have a good reputation among their peers. The views of preschool teachers and parents are comparable when it comes to the types of observers of peer violence. In accordance with the findings of the study by O'Connell et al. (1999), they believe that some children who observe violence adopt the position of supporters, others are passive in seeing peer aggression, and some oppose bullies or report the violence. Parents believe that a small percentage of children will directly support the victim, which is in line with the research and the findings of the study by O'Connell et al. (1999), while preschool teachers believe that a higher percentage of children are willing to report violence or help a child who is a victim of violence.

In line with the findings of Ahmed's 2005 study, parents believe that their children experience shame when they witness peer violence. They also indicate a desire to do something in order to put an end to child violence. In

line with the findings of the Obermann study (2011, as cited in Bilić, 2013; Marković, 2017), parents believe that children who report violence to preschool teachers and expert associates are under stress and fear becoming victims of peer aggression themselves. Parents claim that they have observed externalizing behavioural problems in their children when they witnessed or needed to report peer violence, which is consistent with the findings of related research and the findings of the study by Buka et al. (2001). One of the keys to comprehending the issue of victimhood in peer violence is peer acceptance (Popović-Ćitić, 2012). Therefore, peer acceptance in preschool institutions and schools can be viewed as a protective factor. However, some studies revealed that the school setting was recognized as one where protective factors are least established and evident (Pavlović & Žunić-Pavlović, 2008). Therefore, preschool teachers and expert associates should strive to improve inter-children communication while at the same time encouraging tolerance, which will contribute to the development of a positive atmosphere in the educational group consistently with the findings of the study by Maksimović & Mančić (2013).

Both parents and preschool teachers feel that most children feel uncomfortable and do not want to be observers in peer violence, which is consistent with the results of the study by Twemlow et al. (2003). In accordance with the findings of the study by Vasiljević-Prodanović & Stojković (2011), preschool teachers feel that children observers who are socioemotionally competent can act as mediators in the process of reconciling the victims of peer violence and bullies. On the other hand, parents believe that preschool children cannot be mediators. Preschool teachers have observed that a smaller proportion of children are prepared to attempt to suppress peer violence by siding with their peers. Groups of children are often formed to protect the children who are unable to defend themselves, while bullies are avoided during preschool play, which is consistent with the results of the study by Porter & Smith-Adcock (2011). According to parents, preschool children should not attempt to resolve a situation like this on their own; instead, they should report peer violence to a preschool teacher or an adult, which is consistent with the findings of the study by Cowie & Jennifer (2008). Children observers should be the main focus of programmes for the prevention and suppression of peer violence in preschool settings, according to parents, because there is strength in numbers. Children who might otherwise engage in peer violence should be warned that observers among their peers will support the victim, tipping the scales of power in their favour, which is in line with the findings of a 2009 study by Popadić. The resources available to children observers should not be minimized but rather reoriented to become a strength that can suppress violence, which is consistent with the results of the study by Thompson et al. (2002). In accordance with the findings of the study by Vasiljević-Prodanović & Stojković (2011), parents feel that preschool children who are acting as observers lack the capacity to act as

mediators in peer violence, which is suggested as one of the possibilities for more effective suppression of peer violence.

The majority of parents are of the opinion that peer violence intervention programmes deployed in preschool settings do not have the desired impact. They contend that because preschool settings view externalizing behavioural issues as part of the developmental process, they fail to recognize peer aggression in a timely manner given the children's age. Expert associates do not instruct children observers on the appropriate behaviour when they witness peer violence. An exceedingly small minority of children typically have the courage to stand up to a bully, while the majority wish to help but refrain from doing so out of fear. Enough attention is given to this issue, which has significant ramifications for young observers. Parent observations suggest that preschool teachers and expert associates fail to take the behaviour of children observers seriously enough and these children are not encouraged to assist in the prevention of violence, which is consistent with the findings of the study by Olweus (1998). In line with the findings of Popadić''s study (2009), parents believe that children observers who receive additional training can develop the skills necessary to listen to the victims of bullying and build a cordial relationship with them. Consistent with the results of the study by Hrnčić & Marčetić-Radunović (2018), emotional connections with peers who exhibit prosocial behaviour are positively assessed and may serve as one of the resources of the peer group that can be tapped into. In this regard, this study views children observers as a potential safeguard in the preschool setting, able to protect children who are victims of violence and bullying and encourage children to communicate with one other more effectively.

Conclusion

Children – observers of peer violence have a plethora of roles, including the following: a) reporting peer violence to adults; b) standing by the victim by maintaining an environment of calm in the educational setting; c) developing the skills necessary to support children who are the victims of violence; and d) if they are consistently encouraged to act pro-socially, they will develop into responsible adults, prepared to respond correctly in a variety of violent situations. All of these elements enhance the supportive environment in the student group. Positive emotional climate among peers is one of the most crucial elements in the prevention and suppression of peer violence, according to several authors (Gašić-Pavišić, 2004; Maksimović & Mančić, 2013; Marković, 2017; Popadić, 2008; Reić Ercegovac, 2016).

Children observers often experience psychological pressure when they witness acts of peer violence. They should be encouraged to support the victim and to report the violence. Their pro-social behaviour and compassion should be consistently rewarded. All allegations of peer aggression made by children

observers should be carefully considered by preschool teachers and professional associates, thus encouraging children to respond to violence every time.

According to the results of the current study, parents are far more likely than preschool teachers to believe that children observers are not actively participating in programmes designed to prevent and stop peer violence. Parents believe that because preschool teachers lack the necessary skills for this type of evaluation, they are unable to identify the roles that preschool children play in peer aggression. Parents, in contrast to preschool teachers, feel left out of programmes for the prevention and suppression of peer violence, which are attended by preschool teachers and expert associates. Parents believe that preschool teachers do not have comprehensive intervention strategies involving child observers. Preschool institutions should cooperate with families in involving children who observe violence as a resource in creating a positive psychosocial environment in the educational setting.

This study strives to promote further investigations that will help put peer violence suppression and prevention initiatives into action. Practitioners should evaluate these initiatives and focus on introducing new elements in order to achieve a multi-layered effect in combating peer violence. The fact that parents are not involved in the educational process and have little pedagogical understanding is a limitation of this study since it prevents parents from learning about peer aggression directly. Typically, they learn this information from their children, who are acting as observers. It is customary in preschool settings that conflicts brought on by peer violence hardly ever involve parents of the children who were witnesses of the violent acts.

Given that there is strength in numbers, and that there are more witnesses of peer violence than direct participants, this research can be seen as a step forward in the involvement of children observers as a resource in the prevention of peer aggression despite its limitations, which include the small number of comparable studies in addition to the instrument already discussed.

Future studies may concentrate on the necessity of carefully thought-out interventions in which parents and preschool children work together from an early age to reinforce the idea that children should seek adult assistance when they encounter peer aggression. Children should be made aware by adults that they there is strength in numbers and that by working together they can put an end to peer aggression.

References

Ahmed, E. (2005). Pastoral care to regulate school bullying: Shame management among bystanders. *Pastoral Care in Education*, *23*(2), 23-29. https://doi.org/10.1111/j.0264-3944.2005.00328.x

Bilić, V. (2013). Nasilje među vršnjacima: Uloga branitelja žrtava, pomoćnika i pristaša počinitelja nasilja te pasivnih promatrača [Violence among peers: The role of

victims' defenders, perpetrators' helpers and supporters and bystanders]. *Život i škola*, *59*(30), 193-209.

Bradshaw, C. P., Rodgers, C. R. R., Ghandour, L. A., & Garbarino, J. (2009). Social-cognitive mediators of the association between community violence exposure and aggressive behaviour. *School Psychology Quarterly*, *24*(3), 199-210. https://doi.org/10.1037/a0017362

Buka, S. L., Stichick, T. L., Birdthistle, I., & Earls F. J. (2001). Youth exposure to violence: Prevalence, risks, and consequences. *American Journal of Orthopsychiatry*, *71(*3), 298-310. https://doi.org/10.1037/0002-9432.71.3.298

Cowie, H., & Jennifer, D. (2008). *New perspectives on bullying*. Open University Press.

Cowie, H., & Olafsson, R. (2000). The role of peer support in helping the victims of bullying in a school with high levels of aggression. *School Psychology International*, *21*(1), 79-95. https://doi.org/10.1177/0143034300211006

Fantuzzo, J., Tighe, E., & Childs, S. (2000). Family Involvement Questionnaire: A multivariate assessment of family participation in early childhood education. *Journal of Educational Psychology*, *92*(2), 367-376. https://doi.org/10.1037/0022-0663.92.2.367

Gašić-Pavišić, S. (2004). Mere i programi za prevenciju nasilja u školi [Measures and programmes for the prevention of school violence]. *Zbornik Instituta za pedagoška istraživanja*, *36*(1), 168-187.

Glumbić, N., & Žunić Pavlović, V. (2008). Vršnjačko nasilje u predškolskoj ustanovi [Peer violence in a preschool institution]. *Pedagogija*, *63(*2), 205-212.

Hrnčić, J. H., & Marčetić-Radunović, G. N. (2018). Procena resursa dece i mladih u sukobu sa normama zajednice [Assessing of resources of children and youth in conflict with community norms]. *Sociološki pregled*, *52(*3), 985-1019. https://doi.org/10.5937/socpreg52-18933

Jevtić, B. (2017). Indikativni pokazatelji izloženosti vršnjačkom nasilju [Indicators of exposure to peer violence]. *Godišnjak Pedagoškog fakulteta u Vranju*, *8*(1), 153-166. https://doi.org/10.5937/gufv1701153J

Kojić, M., & Markov, Z. (2011). Prosocijalni diskurs i moralnost kao imperativ u prevenciji nasilja u društvu [Prosocial discourse and morality as an imperative in the prevention of violence in society]. *Pedagogija*, *66*(2), 373-384.

Kraljic Babić, K., & Vejmelka, L. (2015). Specifičnosti nasilja među djecom, prevencije i tretmana nasilnog ponašanja u predškolskoj dobi [Specifics of violence among children, prevention and treatment of violent behaviour in preschool age]. *Socijalne teme*, *1(*2), 91-114.

Lindstrom Johnson, S., Waasdrop, T. E., Debnam, K., & Bradshaw, C. P. (2013). The role of bystander perceptions and school climate in influencing victims' responses to bullying: To retaliate or seek support? *Journal of Criminology*, Article 780460. https://doi.org/10.1155/2013/780460

Low, S., & Van Ryzin, M. (2014). The moderating effects of school climate on bullying prevention efforts. *School Psychology Quarterly*, *29(*3), 306-319. https://doi.org/10.1037/spq0000073

Maksimović, J., & Mančić, D. (2013). Akcijska istraživanja u funkciji prevencije vršnjačkog nasilja [Action research in the function of prevention of peer violence]. *Metodički obzori*, *8*(17), 59-70. https://doi.org/10.32728/mo.08.1.2013.04

Markov, Z. (2019). Uloga dece posmatrača u prevenciji vršnjačkog nasilja u predškolskim ustanovama iz ugla vaspitača [The role of children observers in the prevention of peer violence in preschool institutions from the point of view of preschool teachers].

In M. Maljković (Ed.), *Interdisciplinarni pristup nasilju* [*Interdisciplinary approach to violence*] (pp. 38-49). Visoka škola strukovnih studija za obrazovanje.

Marković, M. (2014). Učenici kao akteri u prevenciji vršnjačkog nasilja u školi [Students as participants in the prevention of bullying in schools]. *Specijalna edukacija i rehabilitacija*, *13*(2), 237-253. https://doi.org/10.5937/specedreh13-6396

Marković, M. R. (2017). Prevencija vršnjačkog nasilja u školskoj praksi – pregled mera i aktivnosti [School-based peer violence prevention – an overview of measures and activities]. *Nastava i vaspitanje*, *66*(1), 157-168. https://doi.org/10.5937/nasvas1701157M

Marković, Ž. M., & Trifunović, V. S. (2017). Polne razlike i nasilje među učenicima osnovnoškolskog uzrasta [Sex differences and violence among primary school students]. *Zbornik radova Filozofskog fakulteta u Prištini*, *47*(1), 63-82. https://doi.org/10.5937/ZRFFP47-12473

Menesini, E., Codecasa, E., Benelli, B., & Cowie, H. (2003). Enhancing children's responsibility to take action against bullying: Evaluation of a befriending intervention in Italian middle schools. *Aggressive Behaviour*, *29*(1), 10-14. https://doi.org/10.1002/ab.80012

Nishina, A., & Juvonen, J. (2005). Daily reports of witnessing and experiencing peer harassment in middle school. *Child Development*, *76(*2), 435-450. https://doi.org/10.1111/j.1467-8624.2005.00855.x

O'Connell, P., Pepler, D., & Craig, W. (1999). Peer involvement in bullying: Insights and challenges for intervention. *Journal of Adolescence*, *22*(4), 437-452. https://doi.org/10.1006/jado.1999.0238

Olweus, D. (1998). *Nasilje među djecom u školi: Što znamo i što možemo učiniti* [*Violence among children at school: What we know and what we can do*]. Školska knjiga.

Opić, S., & Jurčević-Lozančić, A. (2008). Kompetencije učitelja za provedbu pedagoške prevencije poremešaja u ponašanju [Teachers' competence in conducting the pedagogical prevention of behavioural disorders]. *Odgojne znanosti*, *10*(15), 181-194.

Pavlović, M., & Žunić-Pavlović, V. (2008). Planiranje školskih programa prevencije vršnjačkog nasilja [Planning school programmes for the prevention of peer violence]. *Nastava i vaspitanje*, *57*(3), 318-337.

Pečjak, S., & Pirc, T. (2017). School climate in peer bullying: Observers' and active participants' perceptions. *Psihološka obzorja*, *26*, 74-82. https://doi.org/10.20419/2017.26.470

Plut, D., & Popadić, D. (2007). Reagovanje dece i odraslih na školsko nasilje [Reaction of children and adults to violence in school]. *Zbornik Instituta za pedagoška istraživanja*, *39*(2), 347-366. https://doi.org/10.2298/ZIPI0702347P

Popadić, D. (2009). *Nasilje u školama* [*Violence in schools*]. Institut za psihologiju.

Popović-Ćitić, B. (2012). Vezanost za školu kod učenika koji imaju različite uloge u vršnjačkom nasilju [School bonding in students who have different roles in bullying]. *Specijalna edukacija i rehabilitacija*, *11*(4), 547-564. https://doi.org/10.5937/specedreh11-2773

Porter, J. R., & Smith-Adcock, S. (2011). Children who help victims of bullying: Implications for practice. *International Journal for the Advancement of Counseling*, *33*(3), 196-205. https://doi.org/10.1007/s10447-011-9121-9

Pravilnik o stalnom stručnom usavršavanju i napredovanju u zvanja nastavnika, vaspitača i stručnih saradnika [Rulebook on the Continuous Professional Development and

Career Promotion of School Teachers, Preschool Teachers and Expert Associates], Službeni glasnik RS [Official Gazette of the Republic of Serbia] br. 109/21. (2021).
Reić Ercegovac, I. (2016). Doživljeno vršnjačko nasilje: Relacije s dobi, spolom, razrednim ozračjem i školskim uspjehom [Experienced peer violence: Relation to age, gender, class climate and school achievement]. *Školski vjesnik*, *65(*2), 251-272.
Rigby, K., & Johnson, B. (2005). Student bystanders in Australian schools. *Pastoral Care in Education*, *23*(2), 10-16. https://doi.org/10.1111/j.0264-3944.2005.00326.x
Sesar, K. (2011). Obilježja vršnjačkog nasilja [Peer violence characteristics]. *Ljetopis socijalnog rada*, *18*(3), 497-526.
Skočajić, M. S. & Stojanović, F. (2019). *Mladi i vršnjačko nasilje: Kako od pasivnih posmatrača stvoriti agilne građane?* [*Youth and peer violence: How to turn passive bystanders into agile citizens?*]. Centar za istraživanje javnih politika.
Thompson, D., Arora, T., & Sharp, S. (2002). *Bullying: Effective strategies for long-term improvement*. Routledge Falmer.
Twemlow, S. W., Fonagy, P., & Sacco, F. C. (2003). Modifying social aggression in schools. *Journal of Applied Psychoanalytic Studies*, *5*(2), 211-222. https://doi.org/10.1023/A:1022995905118
Vasiljević-Prodanović, D., & Stojković, I. (2011). Praktični aspekti vršnjačke medijacije u školi [Practical aspects of peer mediation in school]. *Zbornik Visoka škola strukovnih studija za obrazovanje vaspitača*, 1, 34-41.
Velki, T., & Ozdanovac, K. (2014). Preventivni programi usmjereni na smanjenje vršnjačkog nasilja u osnovnim školama na području Osječko-baranjske županije [Bullying prevention programmes in primary schools in the Osijek-Baranja county]. *Školski vjesnik*, *63*(3), 327-352.
Zrilić, S. (2006). Sudionici u krugu školskog nasilja – nasilnik, žrtva i promatrač [Participants in the circle of school violence – bully, victim and observer]. *Magistra Iadertina*, *1*(1), 49-57.
Žunić-Pavlović, V., & Kovačević-Lepojević, M. (2011). Prevalencija i razvoj poremećaja ponašanja u detinjstvu [Prevalence and development of behavioral disorders in childhood]. *Specijalna edukacija i rehabilitacija*, *10*(4), 725-742.

Opažanja vaspitača i roditelja o ulozi dece posmatrača u vršnjačkom nasilju

Miroslava B. Kojić[a], Zagorka T. Markov[b], Smiljana S. Kojić Grandić[c,d]

[a] Evropska akademija nauka, Beograd, Srbija
[b]Visoka škola stukovnih studija za obrazovanje vaspitača u Kikindi, Kikinda, Srbija
[c]Osnovna škola „Jovan Popović", Kikinda, Srbija
[d]Osnovna škola „Đura Jakšić", Kikinda, Srbija

Uvod: Vršnjačko nasilje ostavlja najviše posledica na razvoj deteta koje je žrtva nasilništva, ali isto tako i deca posmatrači mogu imati posledice u oblasti socioemocionalnog razvoja. Interventnim programima u predškolskoj ustanovi koji imaju za cilj prevenciju i suzbijanje vršnjačkog nasilja, a u čijem su fokusu posmatrači, država treba da pruži snažnu podršku. *Cilj:* Istraživanje je imalo za cilj da se analiziraju opažanja vaspitača i roditelja o

ulozi dece posmatrača u vršnjačkom nasilju. *Metode:* Uzorak su činili vaspitači zaposleni u predškolskim ustanovama (n = 104) i roditelji čija deca pohađaju vrtiće (n = 84) u više gradova u Srbiji. Za potrebe istraživanja korišćena je prilagođena skala Likertovog tipa kojom se procenjuje uloga dece „posmatrača" u bulingu i mogućnosti razvijanja programa podrške vršnjacima koji su izloženi nasilništvu. Instrument je razvijen na osnovu pilot-istraživanja o ulozi dece posmatrača u bulingu. *Rezultati:* Rezultati istraživanja pokazali su da se opažanja roditelja u vezi sa ulogom dece u vršnjačkom nasilju statistički značajno razlikuju u odnosu na percepcije vaspitača. Roditelji smatraju da deca posmatrači vršnjačkog nasilja nisu dovoljno uključeni u interventne programe prevencije i suzbijanja vršnjačkog nasilja u predškolskim ustanovama. *Zaključak:* Ovi rezultati imaju značajne praktične implikacije, jer ukazuju kako da predškolske ustanove pokrenu programe koji su usmereni na stvaranje pozitivne klime u grupi u kojoj bi deca posmatrači vršnjačkog nasilja bili značajan faktor.

Ključne reči: vršnjačko nasilje, deca posmatrači, vaspitači, roditelji

PRIMLJENO: 08.05.2022.
REVIDIRANO: 29.10.2022.
PRIHVAĆENO: 01.12.2022.

SPECIJALNA EDUKACIJA I REHABILITACIJA
2023, Vol. 22, Br. 1, str. 31-55

UDK: 376.1-056.26/.36(497.6)
616.98:578.834
Originalan naučni rad
DOI: https://doi.org/10.5937/specedreh22-38863

The impact of the COVID-19 pandemic on the provision of speech therapy services in Bosnia and Herzegovina

Mirela M. Duranović, Leila I. Begić, Branka N. Babić Gavrić, Marijana M. Lauc

University of Tuzla, Faculty of Education and Rehabilitation, Tuzla, Bosnia and Herzegovina

Introduction. A newly discovered SARS-CoV-2 virus that causes an infectious disease called Coronavirus Disease 2019 (COVID-19) has spread around the world. *Objectives.* The study aims to explore the impact of the COVID-19 pandemic on speech-language pathologists (SLPs) clinical service delivery. Accordingly, this study aims to determine which modifications were used in the provision of speech-language pathology (SLP) services and which procedures were used by SLPs in their clinical practice in Bosnia and Herzegovina (B&H) during the third pandemic wave. The second aim of the study was to analyze how many SLPs from B&H used telepractice and what are the barriers to performing this type of work. *Methods.* The study included 107 SLPs, who voluntarily joined the survey, after sending the questionnaire directly to the e-mail or placing the questionnaire in online SLPs groups. The survey comprised questions to assess participants' demographics, personal protective equipment, procedures, provision of telepractice, and barriers and limitations to telepractice implementation. *Results.* Results showed that 93.4% of SLPs reported they use measures to prevent and control the COVID-19 pandemic. Only 28% of SLPs used telepractice in their work, which is a very low rate. The majority of SLPs (59.2%) reported that they did not receive the appropriate education about using telepractice. *Conclusion.* The COVID-19 pandemic led to a change in service delivery by SLPs requiring them to modify their work or to provide services through telepractice.

Keywords: speech-language pathology, COVID-19 pandemic, telepractice, personal protective equipment

* Korespondencija: Mirela Duranović, mirela.duranovic@bih.net.ba, mirela.duranovic@gmail.com

Introduction

A newly discovered SARS-CoV-2 virus that causes an infectious disease called Coronavirus Disease 2019 (COVID-19) has spread around the world (Cui et al., 2019). The disease endangered human lives and caused mortality, and various problems such as quarantine, social exclusion (Bejaković et al., 2021), and the obligation to use protective tools (Chandra et al., 2020) negatively influenced different jobs and services, including rehabilitation services. The disease has also hampered the provision and services of speech-language pathologists (Tambyraja et al., 2021). Speech-language pathologists (also called SLPs) are experts who work with people of all ages and prevent, assess, diagnose, and treat many types of communication and swallowing problems such as problems with speech sounds, language, social communication, voice, fluency, feeding and swallowing (American Speech-Language-Hearing Association [ASHA], 2021a).

The proclamation of a pandemic due to the spread of COVID-19 affected a change in service delivery by health professionals who had to adapt to the changes and provide their services via telepractices and use other modifications during the pandemic. SLPs also had to adopt new approaches to their professional activities.

Employers sought to set recommendations to prevent COVID-19 transmission for the safety and well-being of their employees as well as their families. The Centers for Disease Control and Prevention (CDC, 2019) has adopted Guidelines for Wearing Masks. Three types of face masks meet the standard of medical protective equipment: 1. surgical mask, 2. N95 respirator, 3. elastic respirator that covers half of the face. N95 masks are recommended for wearing during aerosol generation procedures, which the CDC (2019) defines as medical procedures that are "more likely to generate higher concentrations of infectious respiratory aerosols compared to coughing, sneezing, speech, or breathing" and result in "uncontrolled respiratory secretion". Higher-level respirators, such as elastomeric respirators that cover half of the face, are also recommended (ASHA, 2020).

Several studies showed that SLPs effectively delivered therapy via telepractice for children with various communication disorders (Houston, 2014). It can be used as the only service delivery model or as a complement to work in person. Investigation of the usefulness of using communication technology in SLP practice has been conducted since the 1970s (Vaughn, 1976; Wertz et al., 1992). It is not a new field of research because the rapid growth of information technology has long influenced the emergence of a broad professional interest in this model of service delivery. Theodoros (2012) stated that a new era is coming in the SLP practice, leading us towards innovation and change as we move forward into the 21st century. Accordingly, different professional associations have been initiated and developed guidelines for the use of telepractice in SLP (Speech Pathology Australia, 2014).

American Speech-Language-Hearing Association (ASHA) is one of the associations that supports the use of telepractice in working with clients with speech, language, and hearing disorders. ASHA defines telepractice as " the delivery of services using telecommunication and Internet technology to remotely connect clinicians to clients, other health care providers, and/or educational professionals for screening, assessment, intervention, consultation, and/or education. It is an appropriate model of service delivery for audiologists and speech-language pathologists and may be the primary mode of service delivery or may supplement in-person services" (ASHA, 2021b, p.1).

Firstly, the intention was to use telepractice to overcome barriers such as distance from the place of residence to the place of treatment, problems with patient transport, the discrepancy in the work schedule of the patient or family member, and an insufficient number of experts in certain areas (ASHA, 2005b, as cited in Tucker, 2012), to be provided with continuity of treatment upon return from the hospital (Turolla et al., 2013) and the costs to be significantly lower (Mutingi & Mbohwa, 2015).

Using telepractice is being analyzed for different speech and language disorders. It has been investigated through analysis of assessments or treatment services in an online and face-to-face environment. Positive results are obtained for a wide range of speech and language disorders: aphasia (Macoir et al., 2017; Theodoros et al., 2008); articulation disorders (Grogan-Johnson et al., 2013; Waite et al., 2006); language disorders (Waite et al., 2010a); motor speech disorders (Constantinescu et al., 2010; Hill et al., 2006, 2009); autism (Boisvert et al., 2010; Gibson et al., 2010; Iacono et al., 2016; Parmanto et al., 2013; Sutherland et al., 2018, 2019); specific learning disorder (Hodge et al., 2019a, 2019b; Waite et al., 2010b); fluency disorders (Carey et al., 2014; Kully, 2002; Lewis et al., 2008; O'Brian et al., 2008; Wilson et al., 2004); swallowing disorders (Cassel, 2016; Malandraki et al., 2011; Perlman & Witthawaskul, 2002; Ward et al., 2007), voice disorders (Halpern et al., 2012; Mashima et al., 2003; Theodoros et al., 2006; Tindall et al., 2008; Towey, 2012). The results of these studies had a positive effect on SLP service during the COVID-19 pandemic because it enabled SLPs to implement telepractice in their work in line with evidence-based practice.

Although studies on the success of telepractice have been conducted years before, the COVID-19 pandemic has impacted every aspect of human life and required completely new SLP service delivery. Telepractice was explored as a possibility, and now it has become an everyday practice. Therefore, the need for new studies on using telepractice among SLPs during the COVID-19 pandemic was recognized (in India: Aggarwal et al., 2020; in Hong Kong: Fong et al., 2021; Lam et al., 2021; in Croatia: Kuvač Kraljević et al., 2020; in the United States: Sylvan et al., 2020).

SLPs redirected their services to telepractice during the COVID-19 pandemic with a generally positive attitude towards its use (Aggarwal et al., 2020). Barriers to clients' refusal of therapy delivered via telepractice included the lack of equipment, insufficient independence, and doubts about its effectiveness (Kuvač Kraljević et al., 2020). Although there was a positive attitude toward telepractice, face-to-face service was preferred by parents and SLPs (Fong et al., 2021; Lam et al., 2021). The problem was that most SLPs had no previous experience (Sylvan et al., 2020) and training in it (Fong et al., 2021). It was concluded how important is was for SLPs to be trained to provide telepractice to increase the quality of these services (Tohidast et al., 2020) and reduce low self-esteem among SLPs about using this new model of work (Sylvan et al., 2020).

Given the virus has spread around the world, the need and importance of personal protective equipment (PPE) in the provision of services of healthcare workers, including SLPs, has been recognized. This study aims to determine which modifications were used in the provision of SLP services and which procedures were used by SLPs in their clinical practice in Bosnia and Herzegovina (B&H) in order to protect their health during the COVID-19 pandemic. Futhermore, as the COVID-19 pandemic indicated using telepractice as new SLP services delivery, the second aim of the study was to analyze how many SLPs from B&H used this model of work, what their experiences, competences, and future expectations about providing telepractice were, and also barriers to performing this type of work. Tucker (2012) noted that "telepractice is still in its infancy, and research into factors of benefits and barriers must be conducted", which became even more important because of the COVID-19 pandemic.

The following questions have been analyzed: What PPE SLPs used in providing SLP services face-to-face; Which procedures SLPs used in their clinical practice; How many SLPs started using telepractice as a model of work because of the COVID-19 pandemic; How was the telepractice organized; What were the barriers to using telepractice.

Methods

Participants

The research sample comprised 107 SLPs from B&H, who voluntarily joined the survey after sending the questionnaire directly to their e-mail addresses or placing the questionnaire in online groups. By completing the questionnaire, the respondents gave their consent to participate in the study. The SLPs belonged to different age groups, with the majority under 40 years of age (86.7%) and with working experience of more than 5 years (55.1%). They came from various geographic settings, usually from urban areas (75.7%), and worked within different systems of employment, both public and private. Most were working full-time (85.0%) and seeing more than 20 patients

per week (66.3%). Only 29.0% of SLPs used telepractice in their work. Less than half of SLPs had COVID-19 positive tests, and 55.1% of them had had a vaccination. Sociodemographic details of the participants are presented in Table 1.

Table 1

Socioemographic characteristics of survey participants

Variable	Groups	*N* (%)
Gender	Female	91 (85.1)
	Male	16 (15.0)
Age group	20-25	25 (23.4)
	26-30	31 (29.0)
	31-40	37 (34.6)
	41-50	12 (11.2)
	51-60	2 (1.9)
Years of working experience	0-5 yrs.	58 (54.2)
	6-10 yrs.	25 (23.4)
	11-20 yrs.	19 (17.8)
	21-30 yrs.	5 (4.7)
Geographic setting	Urban	81 (75.7)
	Suburban	16 (15.0)
	Rural	10 (9.3)
System of employment	Health care	36 (33.6)
	Education	46 (43.0)
	Private practice & NGO	24 (22.4)
	Social	1 (0.9)
Hour	Full-time	91 (85.0)
	Half-time	7 (6.5)
	Other	9 (8.4)
Number of patients per week	< 10	12 (11.2)
	11-20	24 (22.4)
	21-30	30 (28.0)
	> 30	41 (38.3)
Have you used telepractice in your work?	Yes	31 (29.0)
	No	76 (71.0)
Having the COVID-19 positive test	Yes	50 (46.7)
	No	57 (53.3)
Vaccinated	Yes	59 (55.1)
	No	48 (44.9)

Procedure

This study presents the results of a survey conducted in November-December 2021 in B&H, which aims to provide information on SLPs' experiences in clinical service delivery during two years of the COVID-19 pandemic. An online form/survey

was created in the Google Forms application included in the Google Docs office suite. The questionnaires were sent to the e-mail addresses of the respondents or placed in support groups for SLPs. The survey was anonymous and took about 10 minutes to be completed.

Instruments

Three questionnaires have been developed for the purposes of the present study.

The first questionnaire included demographic information, questions about PPE used by SLPs in providing SLP services face-to face, and information about procedures that SLPs use in their clinical practice and procedures established by the institution where they work. To gather both quantitative and qualitative information about the impact of COVID-19 on SLP's work, the survey included 10 demographic-related questions, 11 close-ended questions which provided respondents with predefined answer options to choose from (e.g. Does your institution have procedures in place due to the COVID-19 pandemic) and three open-ended questions (e.g. What would you add from PPE?). Among close-ended questions eight of them were simple yes/no questions, and three were multiple-choice questions about a specific piece of information. On multiple-choice questions, participants were able to select multiple answers and/or provide written responses.

The second questionnaire was prepared for those who used telepractice in their work, with the aim of getting more information about the type of services that SLPs provided via telepractice, their experiences, competencies, and future expectations about providing telepractice. Some questions have been used from the Telehealth Services: Pediatric Provider Survey constructed by Campbell and Goldstein (2021) for their study. The survey included 15 close-ended questions and seven open-ended questions. Among close-ended questions six of them were simple yes/no questions (e.g. Did you provide telepractice before the COVID-19 pandemic?), and nine of were questions about a specific piece of information (e.g. What is your level of expertise in providing telepractice before a pandemic: unprofessional; a little professional; professional; quite professional; very professional). The third questionnaire was developed for those who did not provide telepractice in their clinical work with the aim of detecting potential barriers and limitations to telepractice implementation and how SLPs perceived its benefits. Different questions have been developed, such as 10 close-ended questions, five of which were simple yes/no questions (e.g. Would you like to use telepractice?) and five were questions about a specific piece of information (e.g. Do you think that with the use of telepractice you would: Facilitate your work during a pandemic; Make your work difficult during a pandemic; Facilitate your work whether it is a pandemic or not; Allow clients from distant places to be involved in therapy; Enable cost reduction for those living in remote places; Increase access to speech therapy for more users). There was only one open-ended question (What are the reasons why you do not use telepractice).

Concerning the open-ended questions, the same procedure was used as in the study conducted by Sylvan et al. (2020). The research team analyzed all responses and gave them a code. Each open-ended question was put into its tab within Excel and read by each member of the research team who familiarized themselves with it to find the main categories to be used as the codes. A combination of open coding and codes derived from the study's conceptual framework (Maxwell, 1996; Strauss & Corbin, 1998, all cited in Sylvan et al., 2020) was used for developing codes. All members of the research team made a consensus about the identification of codes and the connection of responses to adequate codes. When the coding process was finished, the percentage of responses for open-ended questions, which included the appropriate codes, was analyzed.

Results

Procedure in SLPs work during the COVID-19 pandemic

Survey participants were asked about the procedure used in work during the COVID-19 pandemic, PPE, and modifications and changes in providing SLP services during the pandemic. The results showed that 93.4% of clinicians reported they had procedures in place due to the COVID-19 pandemic, with using measures for epidemic prevention and control as the most common. SLPs were asked to determine changes in their work due to the COVID-19 pandemic. The majority of them stated that they applied measures for epidemic prevention and control, and 29.0% of them started to use telepractice. Some of them noted that they did not conduct group work anymore, changed the way of work itself, they educated more parents, reduced the number of clients, or shortened the length of treatment. The mostly used PPE were a surgical mask, gloves, visor, and canvas mask. More than half of the participants thought the equipment they used protected them enough from the virus while working with clients, while 48.1% of respondents did not think that this equipment was enough, but mostly without any idea what they would add. The majority of respondents answered that those entering their institutions were being screened for COVID-19, some of them answered about temperature measurement, self-reporting of symptoms, and some of them about statement of contact with a person who had COVID-19. Antigen tests, PCR tests, evidence of vaccination and nasal swab have been rarely required. In almost all cases SLPs answered that their clients did not need to have testing or vaccine certificates to get their services. More than half of the respondents noted that the number of patients decreased due to the pandemic, mostly decreasing to less than five patients per week. Most SLPs answered they did not shorten working hours because of COVID-19 and did not have a forced annual leave, and 74.5% of them did not transfer to other jobs. More than half of the respondents answered that parents were involved more in working with their children than before the COVID-19 pandemic.

Table 2

Personal protective equipment and procedures used by SLPs in their clinical practice

Questions	Answers	*N* (%)
Does your institution have procedures in place due to the COVID-19 pandemic?	yes	99 (93.4)
	no	7 (6.6)
What do the procedures require?	measures for epidemic prevention and control (use of PPE, constant disinfection of materials, washing hands frequently, distance, temperature measurement)	88 (83.0)
	online therapy	6 (5.7)
	other	5 (4.7)
	there are currently no procedures	7 (6.6)
What have you changed in your work due to the COVID-19 pandemic?	applying measures for epidemic prevention and control	40 (37.4)
	more education of parents	7 (6.5)
	the way of work itself	9 (8.4)
	reduced number of clients	6 (5.6)
	shorten the length of treatment	4 (3.7)
	do not conduct group work	10 (9.4)
	using of telepractice	31 (29.0)
Protective equipment	surgical mask	84 (32.9)
	canvas mask	36 (14.1)
	FFP masks	10 (3.9)
	gloves	50 (19.6)
	gown	8 (3.1)
	visor	46 (18.0)
	glasses	2 (0.8)
	n95 respirator	-
	elastomic respirator	-
	transparent face masks	-
	plexiglass	6 (2.4)
	other	13 (5.1)
Do you think the equipment you use protects you enough from viruse while working with clients?	yes	55 (51.9)
	no	51 (48.1)

Questions	Answers	*N* (%)
If you think it's not enough, what would you add?	online therapy	5 (4.7)
	plexiglas/visors/partitions	11 (10.4)
	nothing	8 (7.5)
	mandatory vaccination	4 (3.8)
	distance	2 (1.9)
	other	10 (9.4)
	missing answers	66 (62.3)
Are those entering institution where you work being screened for COVID-19?	yes	89 (84.0)
	no	17 (16.0)
On what way?	temperature measurement	87 (47.0)
	nasal swab	1 (0.5)
	self-reporting of symptoms	40 (21.6)
	statement of contact with a person who has had COVID-19	23 (12.4)
	antigen test	2 (1.1)
	PCR test	2 (1.1)
	evidence of vaccination	7 (3.8)
	other	23 (12.4)
Is the testing or vaccine certificate required for your clients?	yes	1 (0.9)
	no	105 (99.1)
Has the number of patients decreased due to the pandemic?	yes	55 (51.9)
	no	51 (48.1)
On average, how much less patients do you have per week than before the COVID-19 pandemic?	less than 5	88 (83.0)
	5-10	15 (14.2)
	more than 10	3 (2.8)
Did you shorten working hours because of COVID-19, did you have a forced annual leave?	yes	37 (34.9)
	no	69 (65.1)
Have you worked more with parents and involved them more in work with their children than before the COVID-19 pandemic?	yes	66 (62.3)
	no	40 (37.7)
Have you been transferred to other jobs?	yes	27 (25.5)
	no	79 (74.5)

SLPs' Provision of Telepractice

SLPs who used telepractice were asked to express their experiences and future expectations about providing SLP services through telepractice. Participants were asked how many months or years of experience they had in providing SLP services through telepractice. The majority of SLPs had less than

six months of experience in using telepractice. Only 16.1% of SLPs provided telepractice before the COVID-19 pandemic. Most of the respondents did not receive any training on the provision of such services. Before the pandemic, most of the respondents indicated their knowledge in using telepractice as unprofessional, and some of them as a little professional, while from March 2020 to June 2020, only 9.7% indicated to be unprofessional. Before the pandemic, only 16.1% of the respondents provided 20.0% of services through telepractice. In contrast, from March 2020 to June 2020, 45.2% of SLPs reported serving 100% of their clients via telepractice. For those who did not use telepractice in that period, 19.4% of institutions were allowed to provide SLP services by alternative methods (e.g. paper materials given to clients, consultation with parents). Mostly, telepractice was implemented in the house and office. Only 32.3% SLPs answered that during the period from March 2020 to June 2020, clients had the opportunity to choose whether to be included in direct therapy or teletherapy, and more than half of clients were open to both telepractice and direct therapy. Participants used different platforms to conduct telepractice, mostly Zoom, Viber and Skype. Hybrid was the most common type of telepractice. Telepractice was mostly used for speech sound disorders, fluency disorders, literacy disorders, speech and language delay. The most common materials used for telepractice were worksheets and pictures and cards.

The majority of respondents reported they preferred to work in person. Only 3.2% SLPs reported being very successful in conducting telepractice. Most of them were noted to be slightly successful, successful or quite successful. Less than half of SLPs continued to use telepractice after August 2020, but 74.2% of the respondents reported planning to use telepractice in the future. Those who answered that they would not use telepractice in the future said that the reasons for that included the opinion that working in person was more effective and poor cooperation with parents due to insufficient technological resources.

Table 3

Using of telepractice

Questions	Answers	*N* (%)
How many months / years of experience do you have in providing speech therapy services through telepractice?	up to 6 months	13 (41.9)
	1 year	7 (22.6)
	1.5 years	2 (6.5)
	2 years	9 (29.0)
Did you provide telepractice before the COVID-19 pandemic?	yes	5 (16.1)
	no	26 (83.9)
Have you received training on the provision of services through telepractice?	yes	1 (3.2)
	no	30 (96.8)

Questions	Answers	*N* (%)
What is your level of expertise in providing telepractice before a pandemic?	unprofessional	26 (83.9)
	a little professional	5 (16.1)
	professional	-
	quite professional	-
	very professional	-
Taking into account the services you provided before March 2020 (Covid 19), please indicate the approximate percentage of services you provided through telepractice	20%	5 (16.1)
	40%	-
	60%	-
	80%	-
	100%	-
	none	26 (83.9)
From March 2020 to June 2020, did you provide telepractice (at the time of the total closure due to the pandemic)	yes	29 (93.5)
	no	2 (6.5)
The approximate percentage of direct therapy services provided through telepractice from March 2020 to June 2020:	20%	-
	40%	-
	60%	-
	80%	-
	100%	17 (54.8)
	none	14 (45.2)
In the period from March 2020 to June 2020, my employer was:	temporarily closed	6 (19.3)
	fired SLPs	2 (6.5)
	allowed SLPs to go on home visits to provide services	-
	allowed SLPs to work in their workplaces to provide direct therapeutic services	-
	allowed SLPs to provide telepractice	17 (54.8)
	allowed SLPs to provide therapeutic services by alternative methods (e.g. paper materials given to clients, consultation with parents)	6 (19.4)
Indicate your level of expertise in providing telepractice from March 2020 to June 2020.	unprofessional	3 (9.7)
	a little professional	5 (16.1)
	professional	13 (41.9)
	quite professional	10 (32.3)
	very professional	-

Questions	Answers	*N* (%)
During the therapy you provided through teletherapy from March 2020 to June 2020, please indicate where you were:	house	9 (52.9)
	office	7 (41.2)
	school	1 (5.9)
	car	-
	other	-
During the period from March 2020 to June 2020, clients had the opportunity to choose whether to be included in direct therapy or teletherapy	yes	10 (32.3)
	no	21 (67.7)
What was the readiness of your clients to participate in telepractice during the period from March 2020 to June 2020?	clients wanted to participate only in telepractice	10 (32.3)
	clients only wanted direct therapy	1 (3.2)
	clients were open to both telepractice and direct therapy	18 (58.1)
	clients have chosen not to receive any type of services during this period (services have been suspended)	2 (6.5)
	other	-
Which platforms did you use to perform telepractice?	mesinger	3 (5.1)
	viber	12 (20.3)
	skype	8 (13.6)
	times office 365	1 (1.7)
	meet	2 (3.4)
	google classroom	3 (5.1)
	zoom	16 (27.1)
	boom cards	1 (1.7)
	google docks	1 (1.7)
	moodle	1 (1.7)
	whats up	3 (5.1)
	teams	3 (5.1)
	gmail	2 (3.4)
	other	3 (5.1)
What type of telepractice have you used?	synchronous (client interactive – direct work with the client)	9 (29.0)
	asynchronous (forward the material to the client)	4 (12.9)
	hybrid (combination of synchronized and asynchronous)	18 (58.1)

Questions	Answers	*N* (%)
What speech and language disorders have you worked with through teletherapy?	speech sound disorders	28 (32.9)
	speech and language delay	11 (12.9)
	developmental dysphasia	5 (5.9)
	fluency disorders	15 (17.6)
	literacy disorders	15 (17.6)
	language disorders	7 (8.2)
	social communication disorder	2 (2.4)
	motor speech disorders	2 (2.4)
What materials did you use during the telepractice?	worksheets	20 (37.0)
	video	3 (5.6)
	tips for parents	3 (5.6)
	pictures and cards	8 (14.8)
	games	1 (1.9)
	quizzes	4 (7.4)
	picture books	3 (5.6)
	pdf	1 (1.9)
	ppt	3 (5.6)
	boom	1 (1.9)
	youtube	1 (1.9)
	rasturam.com, online school – artrea	6 (11.1)
What form of work do you prefer:	in person	25 (80.6)
	telepractice	-
	combination of telepractice and work in person	6 (19.4)
In your opinion, the results in working with clients are better:	in person	29 (93.5)
	by using telepractice	-
	telepractice and direct work with clients are equally successful	2 (6.5)
How successful was the telepractice you used in working with clients:	was not successful at all	1 (3.2)
	slightly successful	8 (25.8)
	successful	11 (35.5)
	quite successful	10 (32.3)
	very successful	1 (3.2)
Have you provided telepractice since August 2020?	yes	13 (41.9)
	no	18 (58.1)
Will you be providing telepractice in the future?	yes	23 (74.2)
	no	8 (25.8)
If you have indicated that you will no longer provide telepractice: state the reasons why you will not, what made it difficult / impossible for you to provide telepractice:	work in person is more effective	5 (16.1)
	poor cooperation with parents	3 (9.7)
	due to insufficient technological resources	
	I will continue to use telepractice	23 (74.2)

Barriers in using telepractice

For those who did not use telepractice in their work, we wanted to analyze what were the barriers in using telepractice. More than half, 53.9% of the participants would not like to use telepractice at all, although 57.9% of them answered to be familiar with the benefits of telepractice. They think that telepractice allows clients from distant places to be involved in therapy (26.1%), enables cost reduction for those living in remote places (20.5%), increases access to SLP services for more users (20.5%), facilitates their work during a pandemic (14.8%), and facilitates their work whether it is a pandemic or not (7.4%). For 45% of SLPs, the lack of physical contact makes it impossible to conduct adequate therapy, which is the reason why they do not want to use telepractice. The other reasons are: telepractice is too static (16.5%), clients do not want to be involved in telepractice (13.8%), the client cannot be focused on working online as in direct therapy (10.1%), lack of time, due to too many clients, to get acquainted with the technologies and possibilities of telepractice (9.2%). More than half of SLPs (52.6%) think that telepractice would prevent them from being infected with coronavirus and 73.7% of them are not familiar with research that has shown the effectiveness of telepractice. The additional reasons why they do not use telepractice are the following: not receiving proper education on telepractice (21.1%), the employer did not adopt clear procedures for conducting telepractice (16.2%), the employer does not recognize or allow this type of therapy (10.5%), lack of technical support (10.5%), inadequate internet access (10.1%), inadequate computer (9.2%), technical problems that appear for no apparent reason (6.1%), don't have a microphone (5.7%), don't have speakers (5.3%), frequent freezing of video connections (5.3%). The other reasons were problems with the clients' technology: the client does not know how to install the appropriate teletherapy programs (21.9%), the client does not know how to use teletherapy programs (20.6%), inadequate computer (19.4%), and inadequate internet connection (17.4%). The majority of SLPs, 59.2% of them, reported that they did not receive the appropriate education on telepractice and 64.5% of them are not familiar with the programs through which telepractice can be conducted.

Table 4

Barriers in using telepractice

Questions	Answers	*N* (%)
Would you like to use telepractice?	yes	35 (46.1)
	no	41 (53.9)
Are you familiar with the benefits of telepractice:	yes	44 (57.9)
	no	30 (39.5)
	I am not at all aware that telepractice can be used in speech therapy	2 (2.6)
Do you think that with the use of telepractice you would:	facilitate your work during a pandemic	26 (14.8)
	make your work difficult during a pandemic	19 (10.8)
	facilitate your work whether it is a pandemic or not	13 (7.4)
	allow clients from distant places to be involved in therapy	46 (26.1)
	enable cost reduction for those living in remote places	36 (20.5)
	increase access to speech therapy for more users	36 (20.5)
Is the reason why you don't want to use telepractice the following:	the client cannot be focused on working online as in direct therapy	11 (10.1)
	clients do not want to be involved in telepractice	15 (13.8)
	telepractice is too static	18 (16.5)
	lack of physical contact makes it impossible to conduct adequate therapy	49 (45.0)
	lack of time, due to too many clients, to get acquainted with the technologies and possibilities of telepractice	10 (9.2)
	other	6 (5.5)
Do you think that telepractice would prevent you from being infected with coronavirus?	yes	40 (52.6)
	no	36 (47.4)
Are you familiar with researches that have shown the effectiveness of telepractice in working with clients with different speech and language disorders?	yes	20 (26.3)
	no	56 (73.7)

Questions	Answers	*N* (%)
Reasons why I do not use telepractice:	the employer does not recognize or allow this type of therapy	24 (10.5)
	the employer did not adopt clear procedures for conducting telepractice	37 (16.2)
	inadequate internet access	23 (10.1)
	inadequate computer	21 (9.2)
	I don't have speakers	12 (5.3)
	I don't have a microphone	13 (5.7)
	frequent freezing of video connections	12 (5.3)
	technical problems that appear for no apparent reason	14 (6.1)
	lack of technical support	24 (10.5)
	we have not received proper education on telepractice	48 (21.1)
Clients do not have the appropriate technology:	computer	30 (19.4)
	internet connection	27 (17.4)
	they do not know how to install the appropriate teletherapy programs	34 (21.9)
	they don't know how to use teletherapy programs	32 (20.6)
	other	32 (20.6)
Have you received the appropriate education on telepractice:	yes	1 (1.3)
	we had no education on telepractice	45 (59.2)
	the education we had was not enough	29 (38.2)
	the education we had was not adequate	1 (1.3)
Are you familiar with the programs through which telepractice can be conducted?	yes	
	no	27 (35.5)
		49 (64.5)

Disscusion

The goal of this study was to analyze the impact of the COVID-19 pandemic on SLPs service in B&H. The results showed that in B&H, SLPs established a procedure in their work during the COVID-19 pandemic. Changes made in their work included the absence of group work, more education given to parents, reduced number of clients, or shortened length of treatment. The mostly used PPE were surgical masks, gloves, visors, and canvas masks, which was in line with other studies that found more than one type of protection during clinical encounters, with most often mask and gloves used in combination (Kearney et al., 2021).

Kearney et al. (2021) noted that SLPs reported that due to a pandemic, their treatments were more limited in frequency or carried out indirectly by

telephone or teleconference, and potentially, some treatments could be cancelled. In this study, SLPs also noted that the number of patients decreased due to the pandemic, shortened working hours, with more involvement of parents. Chadd et al. (2021) also found that fewer patients have been involved in SLP services since the beginning of the pandemic, which is in line with the results of this study. They also identified several changes, including the adoption of more flexible approaches to service delivery (such as teletherapy) and the inability to provide services to some patients.

The majority of SLPs in B&H had less than six months of experience in using telepractice. Sylvan et al. (2020) also found that the majority of SLPs reported they had never provided telepractice before the COVID-19 pandemic, which is consistent with the ASHA (2020) survey.

The most SLPs in B&H did not receive any training on telepractice, although SLPs need to be trained on how to implement telepractice to increase the quality of these services (Tohidast et al., 2020) and reduce low self-confidence in using this type of work (Sylvan et al., 2020).

During the pandemic, SLPs in B&H reported an increase in using telepractice. It was mostly implemented in the house and office. Participants used different platforms to conduct telepractice, mostly Zoom, Viber, and Skype, while Aggarwal et al. (2020) noted WhatsApp as the most commonly used platform by SLPs.

Hybrid was the most common type of telepractice used by SLPs in B&H. Adams et al. (2021) also reported that patients were redirected due to the COVID-19 pandemic to receive therapies using a hybrid model, which was the most reported type of telepractice in SLP in most publications (Keck & Doarn, 2014). However, SLPs in the USA mostly used synchronous rather than hybrid telepractice, which showed that they were aware that real-time interaction was key to telepractice, but also stated that storage and forwarding technology could also be considered to provide telepractice (Mashima & Doarn, 2008).

Telepractice was mostly used for speech sound disorders, fluency disorders, literacy disorders, and speech and language delay. The same results were reported by Speech Pathology Australia (2014) and Fong et al. (2021). Developmental language disorders and speech sound disorders are most common in the population receiving teletherapy.

The most common materials used for telepractice were worksheets and pictures and cards. The majority of respondents reported they preferred working in person, and the results of working with clients are better in person. In other studies, this way of service has also been preferred by both SLPs and parents (Fong et al., 2021; Lam et al., 2021).

SLPs from B&H, 74.2% of them, reported to plan using telepractice in the future, which is similar to the results obtained by Campbell and Goldstein (2021). Aggarwal et al. (2020) in India also determined the acceptance

of this type of therapy by SLPs and predicted its use in the future. Those who answered that they would not use telepractice in the future said that the reasons for that included the opinion that working in person was more effective, and poor cooperation with parents due to insufficient technological resources. Tenforde et al. (2020) also noted limitations in technology for using telepractice, and Aggarwal et al. (2020) found that the biggest challenges in applying telepractice were network problems and a child's lack of cooperation.

A very small percentage of SLPs in B&H, only 28.0%, used telepractice in their work regardless of the pandemic. In other studies, the increse in using teleparactice was noted in the months after the pandemic began (Aggarwal et al., 2020; Campbell & Goldstein, 2021). SLPs in B&H did not use telepractice before the pandemic, and a very small percentage of them included this type of service in their work during the pandemic.

Given that a very small percentage of SLPs used telepractice in their work, we tried to determine the reason for this, and what barriers disabled them to use this type of therapy, given the fact that during the state of emergency due to the COVID-19 pandemic in B&H many institutions were closed, and the number of services were reduced in health facilities. It is known that COVID-19 can be easily transmitted in case of close contact between people in case PPE, including medical masks, gloves, face shields, and other protective tools, are not used (Sheeren et al., 2020). Therefore, it is very important to keep a distance between SLPs and the client and to use PPE to avoid infection with the coronavirus. Face-to-face communication, observation of speech articulators, establishing eye contact, touching the child, or using special toys to communicate with children increase the risk of disease transmission, making SLP's direct work during the COVID-19 pandemic very risky (Tohidast et al., 2020). In such conditions, telepractice was of great importance for SLPs, and its application would enable the continuation of providing services to clients in these extraordinary circumstances and would reduce the risk of infection and SLPs and clients themselves.

More than half of SLPs in B&H would not like to use telepractice at all. Some of SLPs have been aware of the potential of telepractice to provide access to SLP services to clients in a larger geographical area (Manning et al., 2020; Sutherland et al., 2016), increase access to speech therapy for more users, facilitate their work, facilitate their work during a pandemic, facilitate their work whether there is a pandemic or not (Brady, 2007), but 10.8% of them think that telepractice would make their work difficult during a pandemic.

A study conducted by Kuvač Kraljević et al. (2020) in Croatia showed that the main reasons for the client's refusal of telepractice include lack of equipment or independence and doubts about its effectiveness, which is consistent with the results of this study. The majority of SLPs reported that they did not receive the appropriate education, and they were not familiar with

the programs for telepractice and with research studies that have shown the effectiveness of telepractice in working with clients with different speech and language disorders.

Conclusion

The pandemic due to the spread of COVID-19 led to a change in service delivery by SLPs who had to incorporate changes in their work or provide their services via telepractices. This study showed how lifelong learning is an important and necessary process that every person must undergo in order to more easily adapt to new and unexpected situations in a changing environment (Dragčević Kozjak, 2018). Although Brady (2007) noted that telepractice can alleviate the shortage of SLPs, reduce costs, allow wider connectivity, the least restrictive environment, and may also be a suitable means of SLP service during pandemics and social exclusion conditions, telepractice was something new for SLPs from B&H and most of them could not take advantage of the benefits of technology during the COVID-19 pandemic and protect their health. Another reason for not using telepractice in a big percentage by SLPs from B&H are already noted barriers such as cost, technology issues, lack of professional standards, and lack of data on its effectiveness and cost-effectiveness (Mashima & Doarn, 2008).

This study can serve as a warning to SLPs around the world about the need for constant acquaintance with the evidence-based results in SLPs' work and the need for continuous lifelong learning so they can be best organized to serve clients effectively. It is important to constantly act on promoting various models of SLP services, especially those for which effectiveness has been confirmed (Law et al., 2019), such as telepractice and its positive results obtained for different speech and language disorders in many studies.

This study also provides information about measures for epidemic prevention and control for SLPs in direct work with clients. Often disinfection, hand washing, mask, gloves, temperature measurement, not conducting group work, greater education of parents, reducing the number of clients, and shorter duration of treatment were modifications used by SLPs in B&H. If we consider that more than half of SLPs were not tested positive for COVID-19 although they conducted face-to-face therapy, we can conclude that these measures can be good protective tools for SLPs during the COVID-19 pandemic.

References

Adams, S. N., Seedat, J., Coutts, K., & Kater, K-A. (2021). "We are in this together" voices of speech-language pathologists working in South African healthcare contexts during level 4 and level 5 lockdown of COVID-19. *South African Journal of Communication Disorders*, *68*(1), Article 792. https://doi.org/10.4102/sajcd.v68i1.792

Aggarwal, K., Patel, R., & Ravi, R. (2020). Uptake of telepractice among speech-language therapists following COVID-19 pandemic in India. *Speech, Language and Hearing*, *24*(4), 228-234. https://doi.org/10.1080/2050571X.2020.1812034

American Speech-Language-Hearing Association. (2020). *ASHA COVID-19 survey results – May 2020*. https://www.asha.org/uploadedFiles/COVID-19-Tracker-Survey-May-2020.pdf

American Speech-Language-Hearing Association. (2021a). *Who Are Speech-Language Pathologists, and What Do They Do?* https://www.asha.org/public/who-are-speech-language-pathologists

American Speech-Language-Hearing Association. (2021b). *Telepractice*. https://www.asha.org/practice-portal/professional-issues/telepractice/#collapse_3

Bejaković, P., Škare, M., & Pržiklas Družeta, R. (2021). Social exclusion and health inequalities in the time of COVID-19. *Technological and Economic Development of Economy*, *27*(6), 1563-1581. https://doi.org/10.3846/tede.2021.16001

Boisvert, M., Lang, R., Andrianopoulos, M., & Boscardin, M. L. (2010). Telepractice in the assessment and treatment of individuals with autism spectrum disorders: A systematic review. *Developmental Neurorehabilitation*, *13*(6), 423-432. https://doi.org/10.3109/17518423.2010.499889

Brady, A. (2007). Moving toward the future: Providing speech-language pathology services via telehealth. *Home Healthcare Nurse*, *25*(4), 240-244. https://doi.org/10.1097/01.NHH.0000267282.54458.54

Campbell, D. R., & Goldstein, H. (2021). Genesis of a new generation of telepractitioners: The COVID-19 pandemic and pediatric speech-language pathology services. *American Journal of Speech and Language Pathology*, *30*(5), 2143-2154. https://doi.org/10.1044/2021_AJSLP-21-00013

Carey, B., O'Brian, S., Lowe, R., & Onslow, M. (2014). Webcam delivery of the Camperdown Program for adolescents who stutter: A phase II trial. *Language, Speech, and Hearing Services in Schools*, *45*(4), 314-324. https://doi.org/10.1044/2014_LSHSS-13-0067

Carey, B., O'Brian, S., Onslow, M., Packman, A., & Menzies, R. (2012). Webcam delivery of the Camperdown Program for adolescents who stutter: A phase I trial. *Language, Speech, and Hearing Service sin Schools*, *43*(3), 370-380. https://doi.org/10.1044/0161-1461(2011/11-0010)

Cassel, S. (2016). Case reports: Trial dysphagia interventions conducted via telehealth. *International Journal of Telerehabilitation*, *8(*2), 71-76. https://doi.org/10.5195/ijt.2016.6193

Centers for Disease Control and Prevention. (2019). *Guidance for wearing masks*. https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html

Chadd, K., Moyse, K., & Enderby, P. (2021). Impact of COVID-19 on the speech and language therapy profession and their patients. *Frontiers in Neurology*, 12, Article 629190. https://doi.org/10.3389/fneur.2021.629190

Chandra, A., Haynes, R., Burdon, M., Laidlaw, A., Neffendorf, J., Eames, I., Lee, R. W., Charles, S., Wilson, P., Dick, A., & Flanagan, D. (2020). Personal protective equipment (PPE) for vitreoretinal surgery during COVID-19. *Eye*, *34*(7), 1196-1199. https://doi.org/10.1038/s41433-020-0948-3

Constantinescu, G., Theodoros, D., Russell, T., Ward, E., Wilson, S., & Wootton, R. (2010). Assessing disordered speech and voice in Parkinson's disease: A telerehabilitation application. *International Journal of Language & Communication Disorders*, *45(*6), 630-644. https://doi.org/10.3109/13682820903470569

Cui, J., Li, F., & Shi, Z. L. (2019). Origin and evolution of pathogenic coronaviruses. *Nature Reviews Microbiology, 17*(3), 181-192. https://doi.org/10.1038/s41579-018-0118-9

Dragčević Kozjak, S. (2018, October 25–26). *Pregled obrazovnih sustava ranog i predškolskog odgoja susjednih zemalja Republike Hrvatske* [Paper presentation]. 4th Days of Educational Sciences, Zagreb, Croatia.

Fong, R., Tsai, C. F., & Yiu, O. Y. (2021). The implementation of telepractice in speech language pathology in Hong Kong during the COVID-19 pandemic. *Telemedicine Journal and e-Health*, *27*(1), 30-38. https://doi.org/10.1089/tmj.2020.0223

Gibson, J. L., Pennington, R. C., Stenhoff, D. M., & Hopper, J. S. (2010). Using desktop videoconferencing to deliver interventions to a preschool student with autism. *Topics in Early Childhood Special Education*, *29*(4), 214-225. https://doi.org/10.1177/0271121409352873

Grogan-Johnson, S., Schmidt, A. M., Schenker, J., Alvares, R., Rowan, L., & Taylor, J. (2013). A comparison of speech sound intervention delivered by telepractice and side-by-side service delivery models. *Communication Disorders Quarterly*, *34*(4), 210-220. https://doi.org/10.1177/1525740113484965

Halpern, A. E., Ramig, L. O., Matos, C. E. C., Petska-Cable, J. A., Spielman, J. L., Pogoda, J. M., Gilley, P. M., Sapir, S., Bennett, J. K., & McFarland, D. H. (2012). Innovative technology for the assisted delivery of intensive voice treatment (LSVT®LOUD) for Parkinson disease. *American Journal of Speech-Language Pathology*, *21*(4), 354-367. https://doi.org/10.1044/1058-0360(2012/11-0125)

Hill, A. J., Theodoros, D. G., Russell, T. G., Cahill, L. M., Ward, E. C., & Clark, K. M. (2006). An internet-based telerehabilitation system for the assessment of motor speech disorders: A pilot study. *American Journal of Speech-Language Pathology*, *15*(1), 45-56. https://doi.org/10.1044/1058-0360(2006/006)

Hill, A. J., Theodoros, D., Russell, T., & Ward, E. (2009). Using telerehabilitation to assess apraxia of speech in adults. *International Journal of Language and Communication Disorders*, *44*(5), 731-747. https://doi.org/10.1080/13682820802350537

Hodge, M. A., Sutherland, R., Jeng, K., Bale, G., Batta, P., Cambridge, A., Detheridge, J., Drevensek, S., Edwards, L., Everett, M., Ganesalingam, C., Geier, P., Kass, C., Mathieson, S., McCabe, M., Micallef, K., Molomby, K., Pfeiffer, S., Pope, S., Tait, F., Williamsz, M., Young-Dwarte, L., & Silove, N. (2019a). Literacy assessment via telepractice is comparable to face-to-face assesment in *children* with *reading difficulties living* in *rural Australia*. *Telemedicine and e-Health*, *25*(4), 279-287. https://doi.org/10.1089/tmj.2018.0049

Hodge, M. A., Sutherland, R., Jeng, K., Bale, G., Batta, P., Cambridge, A., Detheridge, J., Drevensek, S., Edwards, L., Everett, M., Ganesalingam, C., Geier, P., Kass, C., Mathieson, S., McCabe, M., Micallef, K., Molomby, K., Ong, N., Pfeiffer, S., Pope, S., Tait, F., Williamsz, M., Young-Dwarte, L., & Silove, N. (2019b). Agreement between telehealth and face-to-face assessment of intellectual ability in children with specific learning disorder. *Journal of Telemedicine and Telecare*, *25*(7), 431-437. https://doi.org/10.1177/1357633X18776095

Houston, K. T. (2014). *Telepractice in speech-language pathology.* Plural Publishing, Inc.

Iacono, T., Dissanayake, C., Trembath, D., Hurdy, K., Erickson, S., & Spong, J. (2016). Family and practitioner perspectives on telehealth for services to young children with autism. *Studies in Health Technology and Informatics*, *231*, 63-73. https://doi.org/10.3233/978-1-61499-712-2-63

Kearney, A., Searl, J., Erickson-DiRenzo, E., & Doyle, P. C. (2021). The impact of COVID-19 on speech-language pathologists engaged in clinical practices with elevated coronavirus transmission risk. *American Journal of Speech-Language Pathology*, *30*(4), 1673-1685. https://doi.org/10.1044/2021_AJSLP-20-00325

Keck, C. S., & Doarn, C. R. (2014). Telehealth technology applications in speech-language pathology. *Telemedicine Journal and E-health, 20i(7)*, 653-659. https://doi.org/10.1089/tmj.2013.0295

Kully, D. (2002). Telehealth in speech-language pathology: Applications to the treatment of stuttering. *Journal of Telemedicine and Telecare*, *6*(2), S39-S41. https://doi.org/10.1258/1357633001935509

Kuvač Kraljević, J., Matić, A., & Pavičić Dokoza, K. (2020). Telepractice as a reaction to the COVID-19 crisis: Insights from Croatian SLP settings. *International Journal of Telerehabilitation*, *12*(2), 93-104. https://doi.org/10.5195/ijt.2020.6325

Lam, J., Lee, S., & Tong, X. (2021). Parents' and students' perceptions of telepractice services for speech-language therapy during the COVID-19 pandemic: Survey study. *JMIR Pediatrics and Parenting*, *4*(1), Article e25675. https://doi.org/10.2196/25675

Law, J., Levicks, P., Rodriguez Ortiz, I., Matić, A., Lyons, R., Messarra, C., Hreich, K. E., & Stankova, M. (2019). Working with the parents and families of children with developmental language disorders: An international perspective. *Journal of Communication Disorders*, *82*, Article 105922. https://doi.org/10.1016/j.jcomdis.2019.105922

Lewis, C., Packman, A., Onslow, M., Simpson, J., & Jones, M. (2008). A phase II trial of telehealth delivery of the Lidcombe Program of Early Stuttering Intervention. *American Journal of Speech-Language Pathology*, *17*(2), 139-149. https://doi.org/10.1044/1058-0360(2008/014)

Macoir, J., Martel Sauvageau, V., Boissy, P., Tousignant, M., & Tousignant, M. (2017). In-home synchronous telespeech therapy to improve functional communication in chronic poststroke aphasia: Results from a quasi-experimental study. *Telemedicine and e-Health*, *23*(8), 630-639. https://doi.org/10.1089/tmj.2016.0235

Malandraki, G. A., McCullough, G., He, X., McWeeny, E., & Perlman, A. L. (2011). Teledynamic evaluation of oropharyngeal swallowing. *Journal of Speech, Language, and Hearing Research*, *54*(6), 1497-1505. https://doi.org/10.1044/1092-4388(2011/10-0284)

Manning, B. L., Harpole, A., Harriott, E. M., Postolowicz, K., & Norton, E. S. (2020). Taking language samples home: Feasibility, reliability, and validity of child language samples conducted remotely with video chat versus in-person. *Journal of Speech, Language, and Hearing Research*, *63*(12), 3982-3990. https://doi.org/10.1044/2020_JSLHR-20-00202

Mashima, P. A., Birkmire-Peters, D. P., Syms, M. J., Holtel, M. R., Burgess, L. P., & Peters, L. J. (2003). Telehealth: Voice therapy using telecommunications technology. *American Journal of Speech-Language Pathology*, *12*(4), 432-439. https://doi.org/10.1044/1058-0360(2003/089)

Mashima, P. A., & Doarn, C. R. (2008). Overview of telehealth activities in speech-language pathology. *Telemedicine Journal and E-health, 14*(4), 1101-1117. https://doi.org/10.1089/tmj.2008.0080

Mutingi, M., & Mbohwa, C. (2015). Developing multi-agent systems for mHealth drug delivery. In S. Adibi (Ed.), *Springer series in bio-/neuroinformatics: Vol. 5. Mobile health* (pp. 671-683). Springer. https://doi.org/10.1007/978-3-319-12817-7_29

O'Brian, S., Packman, A., & Onslow, M. (2008). Telehealth delivery of the Camperdown Program for adults who stutter: A phase I trial. *Journal of Speech, Language, and Hearing Research*, *51*(1), 184-95. https://doi.org/10.1044/1092-4388(2008/014)

Parmanto, B., Pulantara, W., Schutte, J., Saptono, A., & McCue, M. (2013). An integrated telehealth system for remote administration of an adult autism assessment. *Telemedicine and e-Health*, *19*(2), 88-94. https://doi.org/10.1089/tmj.2012.0104

Perlman, A. L., & Witthawaskul, W. (2002). Real-time remote telefluoroscopic assessment of patients with dysphagia. *Dysphagia*, *17*, 162-167. https://doi.org/10.1007/s00455-001-0116-2

Sheeren, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Emergence, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*, *24*, 91-98. https://doi.org/10.1016/j.jare.2020.03.005

Speech Pathology Australia. (2014). *Telepractice in Speech Pathology*. https://www.telemedecine-360.com/wp-content/uploads/2019/02/2015-SPA-0113_Position_Statement_Telepractice_in_Speech.pdf

Sutherland, R., Hodge, A., Trembath, D., Drevensek, S., & Roberts, J. (2016). Overcoming barriers to using telehealth for standardized language assessments. *Perspectives of the ASHA Special Interest Groups*, *1*(18), 41-50. https://doi.org/10.1044/persp1.SIG18.41

Sutherland, R., Trembath, D., & Roberts, J. (2018). Telehealth and autism: A systematic search and review of the literature. *International Journal of Speech-Language Pathology*, *20*(3), 324-336. https://doi.org/10.1080/17549507.2018.1465123

Sutherland, R., Trembath, D., Hodge, M. A., Rose, V., & Roberts, J. (2019). Telehealth and autism: Are telehealth language assessments reliable and feasible for children with autism? *International Journal of Language & Communication Disorders*, *54*(2), 281-291. https://doi.org/10.1111/1460-6984.12440

Sylvan, L., Goldstein, E., & Crandall, M. (2020). Capturing a moment in time: A survey of school-based speech-language pathologists' experiences in the immediate aftermath of the COVID-19 public health emergency. *Perspectives of the ASHA Special Interest Groups*, *5*(6), 1735-1749. https://doi.org/10.1044/2020_PERSP-20-00182

Tambyraja, S. R., Farquharson, K., & Coleman, J. (2021). Speech-language teletherapy services for school-aged children in the United States during the COVID-19 pandemic. *Journal of Education for Students Placed at Risk*, *26*(2), 91-11. https://doi.org/10.1080/10824669.2021.1906249

Tenforde, A. S., Borgstrom, H., Polich, G., Steere, H., Davis, I. S., Cotton, K., O'Donnell, M., & Silver, J. K. (2020). Outpatient physical, occupational, and speech therapy synchronous telemedicine: A survey study of patient satisfaction with virtual visits during the COVID-19 pandemic. *American Journal of Physical Medicine & Rehabilitation*, *99*(11), 977-981. https://doi.org/10.1097/PHM.0000000000001571

Theodoros, D. G., Constantinescu, A. G., Russell, T. G., Ward, E. C., Wilson, S. J., & Wootton, R. (2006). Treating the speech disorder in Parkinson's disease online. *Journal of Telemedicine and Telecare*, *12*(3), 88-91. https://doi.org/10.1258/135763306779380101

Theodoros, D., Hill, A., Russell, T., Ward, E., & Wootton, R. (2008). Assessing acquired language disorders in adults via the Internet. *Telemedicine Journal and e-Health*, *14*(6), 552-559. https://doi.org/10.1089/tmj.2007.0091

Theodoros, D. (2012). A new era in speech-language pathology practice: Innovation and diversification. *International Journal of Speech-Language Pathology*, *14*(3), 189-199. https://doi.org/10.3109/17549507.2011.639390

Tindall, L. R., Huebner, R. A., Stemple, J. C., & Kleinert, H. L. (2008). Videophone-delivered voice therapy: A comparative analysis of outcomes to traditional delivery for adults with Parkinson's disease. *Telemedicine Journal and e-Health*, *14*(10), 1070-1077. https://doi.org/10.1089/tmj.2008.0040

Tohidast, S. A., Mansuri, B., Bagheri, R., & Azimi, H. (2020). Provision of speech-language pathology services for the treatment of speech and language disorders in children during the COVID-19 pandemic: Problems, concerns, and solutions. *International Journal of Pediatric Otorhinolaryngology*, *138*, Article 110262. https://doi.org/10.1016/j.ijporl.2020.110262

Towey, M. (2012). Speech therapy telepractice for vocal cord dysfunction (VCD): MaineCare (Medicaid) cost savings. *International Journal of Telerehabilitation*, *4*(1), 34-36. https://doi.org/10.5195/ijt.2012.6095

Tucker, J. K. (2012). Perspectives of speech-language pathologists on the use of telepractice in schools: The qualitative view. *International Journal of Telerehabilitation*, *4*(2), 47-59. https://doi.org/10.5195/ijt.2012.6102

Turolla, A., Dam, M., Ventura, L., Tonin, P., Agostini, M., Zucconi, C., Kiper, P., Cagnin, A., & Piron, L. (2013). Virtual reality for the rehabilitation of the upper limb motor function after stroke: A prospective controlled trial. *Journal of Neuroengineering and Rehabilitation*, *10*, 85. https://doi.org/10.1186/1743-0003-10-85

Vaughn, G. R. (1976). Tele-communicology: Health-care delivery system for persons with communication disorders. *ASHA*, *18*(1), 13-17.

Waite, M. C., Cahill, L. M., Theodoras, D. G., Busuttin, S., & Russell, T. G. (2006). A pilot study of online assessment of childhood speech disorders. *Journal of Telemedicine and Telecare*, *12*(Suppl. 3), 92-94. https://doi.org/10.1258/135763306779380048

Waite, M. C., Theodoros, D. G., Russell, T. G., & Cahill, L. M. (2010a). Internet-based telehealth assessment of language using the CELF-4. *Language, Speech, and Hearing Services in Schools*, *41*(4), 445-448. https://doi.org/10.1044/0161-1461(2009/08-0131)

Waite, M. C., Theodoros, D. G., Russell, T. G., & Cahill, L. M. (2010b). Assessment of children's literacy via an Internet-based telehealth system. *Telemedicine and e-Health*, *16*(5), 564-575. https://doi.org/10.1089/tmj.2009.0161

Ward, L., White, J., Russel, T., Theodoros, D., Kuhl, M., Nelson, K., & Petters, I. (2007). Assessment of communication and swallowing function post laryngectomy: A telerehabilitation trial. *Journal of Telemedicine and Telecare*, *13*(3), 88-91. https://doi.org/10.1258/135763307783247293

Wertz, R. T., Dronkers, N. F., Bernstein-Ellis, E., Sterling, L. K., Shubitowski, Y., Elman, R., Shenaut, G. K., Knight, R. T., & Deal, J. L. (1992). Potential of telephonic and television technology for appraising and diagnosing neurogenic communication disorders in remote settings. *Aphasiology*, *6*(2), 195-202. https://doi.org/10.1080/02687039208248591

Wilson, L., Onslow, M., & Lincoln, M. (2004). Telehealth adaptation of the Lidcombe Program of early stuttering intervention: Five case studies. *American Journal of Speech and Language Pathology*, *13*(1), 81-93. https://doi.org/10.1044/1058-0360(2004/009)

Uticaj pandemije COVID-19 na pružanje logopedskih usluga u Bosni i Hercegovini

Mirela M. Duranović, Leila I. Begić, Branka N. Babić Gavrić, Marijana M. Lauc

Univerzitet u Tuzli, Edukacijsko-rehabilitacijski fakultet, Tuzla, Bosna i Hercegovina

Uvod: Novootkriveni virus koji uzrokuje zaraznu bolest pod nazivom koronavirus 2019 (COVID-19) proširio se svijetom. *Ciljevi:* Studija ima za cilj istražiti uticaj pandemije COVID-19 na pružanje kliničkih logopedskih usluga. U skladu s tim, ova studija ima za cilj utvrditi koje su modifikacije korištene u pružanju logopedskih usluga i koje su procedure koristili logopedi u svojoj kliničkoj praksi u Bosni i Hercegovini (BiH) tokom trećeg talasa pandemije. Drugi cilj studije bio je analizirati koliko je logopeda iz BiH koristilo telepraksu kao vrstu usluga, ali i barijere u pružanju ove vrste terapije. *Metode:* U studiju je uključeno 107 logopeda, koji su se dobrovoljno uključili u anketu nakon slanja upitnika direktno na e-adresu ili postavljanja upitnika u onlajn grupe logopeda. Anketa se sastojala od pitanja za procjenu demografskih karakteristika učesnika, osobne zaštitne opreme, procedura, pružanja teleprakse, te barijera i ograničenja za implementaciju teleprakse. *Rezultati:* Rezultati su pokazali da je 93.4% kliničara izjavilo da ima procedure za korištenje mjera za prevenciju i kontrolu epidemije. Samo 28% logopeda u BiH koristio je telepraksu u svom radu, što je vrlo niska stopa. Većina logopeda (59.2%) izjavila je da nisu dobili odgovarajuću edukaciju o korištenju teleprakse. *Zaključak:* Pandemija COVID-19 dovela je do promjene u pružanju usluga logopeda koji su morali da modifikuju način rada ili da pružaju usluge putem teleprakse.

Ključne riječi: logopedija, pandemija COVID-19, telepraksa, lična zaštitna oprema

PRIMLJENO: 27.06.2022.
REVIDIRANO: 04.10.2022.
PRIHVAĆENO: 17.10.2022.

SPECIJALNA EDUKACIJA I REHABILITACIJA
2023, Vol. 22, Br. 1, str. 57-73

UDK: 159.923.5.072.59
Originalan naučni rad
DOI: https://doi.org/10.5937/specedreh22-40253

Nivo majndfulnesa u interpersonalnim odnosima − validnost i pouzdanost skale procene

Bojan Z. Dučić, Svetlana S. Kaljača

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

Uvod: Multidimenzionalni koncept majndfulnesa obuhvata voljnu pažnju, usredsređenost na „sadašnji trenutak", praćenje mentalnih procesa i inhibiciju impulsivnog reagovanja. Ispitivanje uticaja nivoa majndfulnesa na kvalitet odnosa na relaciji defektolog–učenik zahteva instrument zadovoljavajućih psihometrijskih karakteristika. *Cilj:* Cilj ovog istraživanja je utvrđivanje interne konzistencije, test–retest pouzdanosti, konvergentne i diskriminativne validnosti Interpersonalne majndfulnes skale. *Metode:* Na uzorku 114 studenata (uzrast: *AS* = 20.75, *SD* = 2.20) proverena je pouzdanost Interpersonalne majndfulnes skale izračunavanjem Krombahove alfe. Za test–retest proveru pouzdanosti formiran je uzorak od 32 studenta (uzrast: *AS* = 21.41, *SD* = 2.46). Na uzorku 59 studenata (uzrast: *AS* = 20.93, *SD* = 1.92) utvrđen je odnos Interpersonalne majndfulnes skale i Skale kognitivnih i afektivnih dimenzija majndfulnesa. Za ispitivanje Pirsonovih korelacija Interpersonalne majndfulnes skale i Skale percipiranog stresa – 10 uzorkom je obuhvaćeno 55 ispitanika (uzrast: *AS* = 20.55, *SD* = 2.47). *Rezultati:* Utvrđeno je da su vrednosti interne konzistencije Interpersonalne majndfulnes skale i njenih supskala prihvatljive (α = .69 – .88), nivo test–retest pouzdanosti je umeren do visok (*ICC* = .58 – .91), korelacija sa ukupnim rezultatom ostvarenim na Skali kognitivnih i afektivnih dimenzija majndfulnesa je statistički značajna i pozitivna ($r = .58$, $p < .001$), a sa Skalom percipiranog stresa – 10 nije statistički značajna ($p > .05$). *Zaključak:* Na osnovu utvrđene pouzdanosti i validnosti može se preporučiti upotreba Interpersonalne majndfulnes skale kao instrumenta kojim se dobijaju pouzdani podaci o kvalitetu i nivou majndfulnesa koji se manifestuje tokom socijalnih interakcija.

Ključne reči: majndfulnes, interpersonalni odnosi, validnost, pouzdanost

* Korespondencija: Bojan Dučić, bojanducic@fasper.bg.ac.rs

Napomena: Rad je nastao kao rezultat istraživanja na projektu koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije (br. ugovora 451-03-68/2022-14).

Uvod

Majndfulnes

Primena tehnika zasnovanih na majndfulnes konceptu podrazumeva voljno usmeravanje kapaciteta pažnje na tzv. „sadašnji trenutak", odnosno na određene stimuluse u trenutku njihovog delovanja. U ovom kontekstu meditacija se može posmatrati kao tehnika čijom se primenom unapređuju kapaciteti tenaciteta pažnje (Chambers et al., 2009). Kada dođe do nevoljnog gubitka fokusa pažnje, registruje se izvor distrakcije, bez opsežnije analize i osuđivanja, da bi se pažnja ponovo usmerila na ciljni stimulus. Unapređivanje kapaciteta voljne pažnje vrši se usmeravanjem i održavanjem njenog fokusa na delove tela, pokrete, disanje ili zvuk (Cavanagh et al., 2014), koje se može sprovoditi u okviru seansi majndfulnes treninga, kao i tokom svakodnevnih aktivnosti kao što su, na primer, hodanje ili uzimanje hrane (Baer et al., 2019). U izvornom obliku, pored meditacije, koja podrazumeva usmeravanje pažnje na jedan stimulus, postoji i tzv. otvorena meditacija, koja podrazumeva usmeravanje pažnje na mentalne procese kako bi osoba postala svesnija mehanizama njihovog delovanja. Majndfulnes koncept obuhvata oba tipa meditacije (Dorjee, 2010). U okviru programa intervencije zasnovanih na majndfulnes konceptu voljna pažnja usmerava se na automatizovane oblike reagovanja na sopstvene emocionalne doživljaje, misaone procese i ponašanja. Usmeravanje pažnje na navedene impulsivne automatizovane oblike ponašanja jedan je od preduslova njihove promene. Aktiviranjem mehanizama samoregulacije, inhibiraju se impulsivni obrasci reagovanja i zamenjuju se fleksibilnijim i adaptivno prihvatljivijim načinima ponašanja (Baer et al., 2019).

Postoji dilema da li se majndfulnes može bolje opisati kao specifičan kvalitet svesti koji obuhvata sveukupni doživljaj vlastitih mentalnih procesa ili predstavlja multidimenzionalni koncept (Chambers et al., 2009). Dordži (Dorjee, 2010) izdvaja pet dimenzija majndfulnesa: *dimenziju „čiste" pažnje*, koja podrazumeva oslanjanje na niže nivoe obrade informacije zasnovane na zvuku ili somatosenzirnim stimulusima i deaktivaciju viših kognitivnih mehanizama koji obuhvataju unutrašnji govor; *dimenziju kontrole pažnje*, odnosno voljnog usmeravanja i održavanja pažnje na iskustva koja se stiču u tzv. „sadašnjem trenutku"; *način obrade emocija, razvoj i odražavanje optimističnog pristupa i pozitivnih emocija*, koji se takođe izdvaja kao posebna dimenzija; *metasvesnost*, koji predstavlja dimenziju praćenja mentalnih procesa tokom nevoljnog preusmeravanja pažnje sa ciljnog stimulusa; *etički okvir majndfulnes pristupa*, koji predstavlja dimenziju zasnovanu na samopoštovanju i poštovanju drugih.

Procena majndfulnesa

Početkom veka povećano interesovanje za majndfulnes prati veliki broj istraživanja posvećenih definisanju ovog koncepta i razvoju skala procene. Na

osnovu dostupne literature utvrđeno je da su od 2004. do 2011. godine ispitane psihometrijske odlike čak 12 skala procene majndfulnesa: (1) *Kentaki inventar majndfulnes veština* (*Kentucky Inventory of Mindfulness Skills*; Baer et al., 2004), (2) *Majndfulnes upitnik* (*The Mindfulness Questionnaire*; Chadwick et al., 2005), (3) *Toronto majndfulnes skala* (*The Toronto Mindfulness Scale*; Lau et al., 2006), (4) *Majndfulnes upitnik pet faktora* (*Five Factors Mindfulness Questionnaire*; Baer et al., 2006), (5) *Skala kognitivnih i afektivnih dimenzija majndfulnesa* (*Cognitive and Affective Mindfulness Scale*; Feldman et al., 2007), (6) *Razvojna majndfulnes anketa* (*Developmental Mindfulness Survey*; Solloway & Fisher, 2007), (7) *Frajburški majndfulnes inventar* (*Freiburg Mindfulness Inventory*; Buchheld et al., 2001; Kohls et al., 2009; Walach et al., 2006), (8) *Filadelfijska majndfulnes skala* (*Philadelphia Mindfulness Scale*; Cardaciotto et al., 2008), (9) *Sautemptonska majndfulnes skala* (*Southampton Mindfulness Scale*; Chadwick et al., 2008), (10) *Skala efekata meditacije* (*Effects of Meditation Scale*; Reavley & Pallant, 2009), (11) *Langerova skala majndfulnesa / odsustva majndfulnesa* (*Langer Mindfulness/Mindlessness Scale*; Haigh et al., 2011) i (12) *Majndfulnes skala svesnosti* (*Mindfulness Attention Awareness Scale*; Brown & Ryan, 2003; Höfling et al., 2011). Nekoliko godina kasnije kreirana je *Interpersonalna mindfulnes skala* (*Interpersonal Mindfulness Scale*, Pratscher et al., 2019), jedina od navedenih kojom se u kontekstu majndfulnesa ispituje kvalitet međuljudskih odnosa. Psihometrijske karakteristike ove skale potvrđene su i istraživanjem Medvedeva i sar. (Medvedev et al., 2020).

Upotreba majndfulnes veština u cilju ostvarivanja interpersonalnih odnosa obuhvata „svest o sebi i drugima", što podrazumeva prihvatanje drugih bez formiranja stavova koji bi bili zasnovani na predašnjim pretpostavkama i stereotipnim obrascima prosuđivanja i inhibiranje potencijalnih ili situaciono provociranih impulsivnih reakcija (Pratscher et al., 2018).

Posvećivanje pažnje sagovorniku predstavlja oblik prosocijalnog angažovanja koji se može smatrati jednim od prediktora kvaliteta socijalnih odnosa. Viši opšti nivo majndfulnesa omogućava da se angažovanjem socijalnih veština, putem aktivnog slušanja, opažanja signala relevantnih za socijalni kontekst, ostvaruju pozitivne socioemocionalne interakcije. Specifičnost majndfulnes pristupa podrazumeva odsustvo automatizovane, brze interpretacije iskaza sagovornika, već strpljenje pri donošenju zaključaka, suzdržavanje od etiketiranja poruka kao negativnih ili pozitivnih i otvorenost za različite oblike tumačenja dobijenih informacija (Manusov et al., 2018).

Primeri nedostatka majndfulnes veština u komunikaciji javljaju se kao ustaljeni obrasci disfunkcionalne interakcije, koji su najčešće svedeni na repetitivne poruke, odnosno cikluse interakcija koji nijednom od partnera u komunikaciji ne omogućavaju da izrazi sopstveno mišljenje, primi informacije i konstruktivno pristupi njihovoj interpretaciji. Preterano oslanjanje na automatizovane verbalne i neverbalne komunikacione obrasce može da dovede

do teškoća u sporazumevanju, pogotovo ukoliko ograničavaju fleksibilnost misaonog procesa, odnosno anticipaciju različitih načina na koje poruka može biti poslata i/ili interpretirana. Stereotipni, rutinski obrasci interpretiranja poruke, koji se svode na impulsivne reakcije na tzv. okidače, odnosno određene reči ili sekvence, bez usmeravanja pažnje na sadržaj poruke kao celine, takođe doprinose teškoćama u komunikaciji. Usmeravanjem pažnje na sagovornika uz inhibiranje rutinskih šema interpretacije informacija kojima se zanemaruju varijacije u slanju poruke, pruža se mogućnost njenog alternativnog načina tumačenja, što snižava rizik od nesporazuma. Takođe, teškoće u ostvarivanju kvalitetnih interpersonalnih odnosa u komunikativnoj situaciji za posledicu mogu da imaju narušavanje privatnosti druge osobe, sumnju da sagovornik nije iskren ili druge oblike kršenja socijalnih pravila. Primena majndfulnes pristupa omogućava poboljšanje socijalnih odnosa kroz promene u načinu razmene informacija, npr. češćoj inicijativi da se prekine izlaganje druge osobe, većem broju postavljenih pitanja ili očekivanjima da druga osoba argumentuje svoje izjave (Burgoon et al., 2000).

Kao posledica pozitivnih rezultata proizašlih iz povećanog interesovanja za koncept majndfulnesa u različitim domenima individualnog i društvenog funkcionisanja prepoznata je potreba da se utvrdi na koji način nivo majndfulnes veština defektologa utiče na kvalitet socijalnih odnosa između njega i učenika sa ometenošću. Da bi se ostvario ovaj cilj neophodno je izdvojiti odgovarajući instrument procene, kojim će se obuhvatiti različite dimenzije majndfulnesa u kontekstu interpersonalnih odnosa i proveriti njegovu pouzdanost i validnost.

Pouzdanost

Jedan od načina definisanja pouzdanosti je da se ona posmatra kao nivo razlika među rezultatima ponovljenih merenja. Svaki rezultat sadrži određen stepen greške koji može da se proceni na osnovu varijabilnosti rezultata dva ili više merenja sprovedenih na istom uzroku. Odstupanja između rezultata dva ili više ponovljenih merenja mogu da budu uzrokovana: varijabilnošću nivoa majndfulnesa između dva ili više merenja, razlikama u interpretaciji ajtema od strane ispitanika tokom više uzastopnih merenja, greškama ispitanika prilikom davanja odgovora (nizak nivo motivacije, umor, nemar i sl.) i greškama osobe koja interpretira rezultate (Weir, 2005). Korelacija ishoda ponovljenih merenja ukazuje na povezanost, odnosno zajedničku varijaciju vrednosti dva ili više rezultata, ali ona ne daje potpunu informaciju o nivou pouzdanosti. Mogućnost prisustva visokog stepena korelacije ne znači nužno da su rezultati saglasni. Drugim rečima, moguće je da, kao posledica sistematske greške, između inicijalne i vrednosti dobijene ponovljenim merenjem ipak postoje velike razlike.

Intraklasni koeficijent korelacije (ICC) predstavlja pokušaj da se prevaziđu ograničenja procene pouzdanosti Prisonovim koeficijentom korelacije (Bruton et al., 2000).

Validnost

Odnos konstrukta majndfulnesa, kao fenomena koji se procenjuje i rezultata procene je kompleksan, jer mentalne procese nije moguće direktno posmatrati, ni proceniti. Da bi se precizno utvrdio nivo npr. majndfulnesa potrebno je da on visoko korelira sa rezultatima odgovarajuće skale koja je namenjena njegovoj proceni. Drugim rečima, „validnost skale je stepen do kojeg ona meri ono što bi trebalo da meri" (Pallant, 2013, p.7). Međutim, nije dovoljno da odnos varijacija nivoa majndfulnesa i rezultata skale procene bude na nivou korelacije, već je potrebno, kako bi se ona smatrala validnom, da varijacije nivoa majndfulnesa uzrokuju odgovarajuće promene rezultata skale. Koncept validnosti ne sme se zasnivati samo na korelacijama, već je neophodno sagledati adekvatnost teorijskog koncepta kojim se objašnjava odnos fenomena kao što je majndfulnes i njegovih indikatora, tj. ajtema skale (Borsboom et al., 2004). Nivoe validnosti potrebno je definisati u skladu sa osetljivošću skale. Što je skala osetljivija, varijacije će biti izraženije i mogućnosti za greške veće (Hammersley, 1987).

Deo činilaca kvaliteta i ishoda defektološkog tretmana su: veština emocionalne samoregulacije defektologa, odnosno suzdržavanje od impulsivnih reakcija, njegova usredsređenost na ponašanje osobe kojoj pruža podršku i prihvatanje njenih individualnih odlika. Izdvajanje instrumenta kojim se u kontekstu majndfulnesa procenjuje kvalitet socijalnih odnosa otvara mogućnost za proširivanje polja istraživanja u oblasti specijalne edukacije i rehabilitacije koja se odnose na ovu oblast.

Cilj ovog istraživanja je utvrđivanje interne konzistencije, test–retest pouzdanosti, konvergentne i diskriminativne validnosti *Interpersonalne majndfulnes skale*.

Metode

Uzorak

Uzorkom su obuhvaćeni studenti Univerziteta u Beogradu - Fakulteta za specijalnu edukaciju i rehabilitaciju i Univerziteta u Novom Sadu, Medicinskog fakulteta Novi Sad. Realizacija cilja ovog istraživanja zahtevala je primenu četiri tipa merenja, pri čemu je za svaku od etapa procene formiran zaseban uzorak studenata ova dva fakulteta.

Pouzdanost *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) proverena je izračunavanjem Krombahove alfe na uzorku koji je činilo 114 ispitanika, od kojih

sedam (6.1%) muškog i 107 (93.9%) ženskog pola. Najmlađi ispitanik imao je 18, a najstariji 35 godina (*AS* = 20.75, *SD* = 2.20).

Za test–retest proveru pouzdanosti *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) formiran je uzorak od 32 ispitanika, tri (9.4%) muškog i 29 (90.6%) ženskog pola, uzrasta od 19 do 29 godina (*AS* = 21.41, *SD* = 2.46).

Na uzorku koji je činilo 59 ispitanika, od kojih tri (5.1%) muškog i 56 (94.9%) ženskog pola, uzrasta od 18 do 29 godina (*AS* = 20.93, *SD* = 1.92), utvrđen je odnos rezultata *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) i *Skale kognitivnih i afektivnih dimenzija majndfulnesa* (Feldman et al., 2007*).*

Za ispitivanje Pirsonovih korelacija rezultata *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) i *Skale percipiranog stresa* (Cohen et al., 1983; Jovanović & Gavrilov-Jerković, 2015) uzorkom je obuhvaćeno 55 ispitanika, od kojih četiri (7.3%) muškog i 51 (92.7%) ženskog pola, starosti od 18 do 35 godina (*AS* = 20.55, *SD* = 2.47).

Instrumenti

Interpersonalna majndfulnes skala (*Interpersonal Mindfulness Scale*; Pratscher et al., 2019) sadrži 27 ajtema grupisanih u četiri supskale, od kojih se svaka odnosi na određenu dimenziju majndfulnesa koja se ispoljava tokom interakcije sa drugim osobama: *Svest o sebi i drugima* (10 ajtema), *Usredsređenost* (sedam ajtema), *Prihvatanje bez osude* (četiri ajtema) i *Nereagovanje* (šest ajtema). Za svaki ajtem ispitanicima je ponuđeno da izaberu jedan od pet ponuđenih odgovora: 1 – skoro nikada, 2 – retko, 3 – ponekad, 4 – često i 5 – gotovo uvek. Veći rezultat upućuje na viši nivo majndfulnesa u međuljudskim odnosima. Zasićenost ajtema je u rasponu od .44 do .74. Autori *Interpersonalne majndfulnes skale* proverili su njenu pouzdanost poređenjem rezultata primene ove skale u vremenskom rasponu od mesec dana na uzorku od 69 studenata. Utvrđena je zadovoljavajuća vrednost ICC (model dvosmernih mešovitih efekata) na nivou *Interpersonalne majndfulnes skale* (α = .86), kao i na supskalama *Svest o sebi i drugima* (α = .68), *Usredsređenost* (α = .87), *Prihvatanje bez osude* (α = .74) i *Nereagovanje* (α = .67).

Skala kognitivnih i afektivnih dimenzija majndfulnesa (*Cognitive and Affective Mindfulness Scale*; Feldman et al., 2007) koristi se za procenu nivoa majndfulnesa. Ispitanici za svaki ajtem biraju jedan od četiri ponuđena odgovora na skali Likertovog tipa. Viši skor podrazumeva viši nivo majndfulnesa. *Skala kognitivnih i afektivnih dimenzija majndfulnesa* sadrži 12 ajtema ravnomerno podeljenih na četiri supskale: *Pažnja*, *Sadašnjost* (usmerenost pažnje na „sadašnji trenutak"), *Svesnost* i *Prihvatanje*. Rezultati faktorske analize pokazuju da tri ajtema koji pripadaju supskalama *Sadašnjost*, *Svesnost* i *Prihvatanje* imaju zasićenja u rasponu od .30 do .40, ali prema tumačenju autora *Skale* ovi ajtemi su zadržani, jer njihov sadržaj odgovara teorijskom konceptu komponente majndfulnesa koja se ispituje odgovarajućom supskalom. Zasićenost ostalih ajtema *Skale kognitivnih i afektivnih dimenzija majndfulnesa* veća je od .40. Na uzorcima studenata dobijene su zadovoljavajuće vrednosti koeficijenata unutrašnje konzistencije Skale (α = .77) i supskale *Pažnja* (α = .79), ali supskale *Sadašnjost* (α

= .47), *Svesnost* (α = .46) i *Prihvatanje* (α = .66) imaju niže vrednosti Krombahove alfe u odnosu na preporučene vrednosti. Na našem uzorku samo supskala *Pažnja* (α =.77) ima zadovoljavajuću vrednost koeficijenta interne konzistencije, dok su vrednosti Krombahove alfe za supskale *Sadašnjost* (α =.57), *Svesnost* (α =.53) i *Prihvatanje* (α =.45) niže od preporučenih.

Za procenu nivoa percipiranog stresa korišćena je srpska verzija *Skale percipiranog stresa – 10* (*Perceived Stress Scale-10*, PSS-10; Cohen et al., 1983), koju su preveli i čiju su validnost ispitali Jovanović i Gavrilov-Jerković (2015). Od ispitanika se očekuje da daju odgovore na 10 ajtema, šest kojima se opisuju negativna osećanja i nivo percipiranog stresa, dok se četiri ajtema odnose na nivo kompetencija za uspostavljanje kontrole nad stresnim događajima. Sve tvrdnje koje čine skalu odnose se na iskustvo stresa koje je ispitanik doživeo mesec dana do dana davanja odgovora. Odgovori se daju na petostepenoj skali Likertovog tipa (0 = nikad, 1 = skoro nikad, 2 = ponekad, 3 = dosta često i 4 = veoma često). Na našem uzorku dobijene vrednosti Krombahove alfe za šest ajtema supskale *Percipirana bespomoćnost* kojima se opisuju negativna osećanja i nivo percipiranog stresa (α = .88), kao i vrednosti za četiri ajtema supskale *Nedostatak samoefikasnosti* koji se odnose na nivo kompetencija za uspostavljanje kontrole nad stresnim događajima (α = .71), te interna konzistencija svih 10 ajtema (α =.89), bile su zadovoljavajuće.

Procedura

Etička komisija Fakulteta za specijalnu edukaciju i rehabilitaciju ustanovila je da su metode, instrumenti i ciljevi istraživanja u potpunosti u skladu sa Etičkim kodeksom naučnoistraživačkog rada zasnovanog na dobroj naučnoj praksi matičnog fakulteta i Kodeksa profesionalne etike Univerziteta u Beogradu, kao i sa srodnim zakonima Republike Srbije (1. 4. 22. godine, br. 154/1).

Interpersonalnu majndfulnes skalu autori istraživanja su nezavisno jedan od drugoga preveli sa engleskog na srpski jezik. Postigli su saglasnost o usklađivanju manjih razlika u prevodu, a zatim je profesionalni prevodilac ponovo preveo Skalu sa srpskog na engleski jezik. Saglasnost ovog prevoda sa originalom utvrdio je lektor čiji je maternji jezik engleski.

Studenti su putem grupne mejl adrese informisani o cilju istraživanja i o merama zaštite identiteta ispitanika i podataka. Onlajn su dali pristanak da učestvuju u istraživanju i pristupili uputstvima za davanje odgovora i ajtemima skala.

Obrada podataka

Izračunate su vrednosti deskriptivnih statistika. Pouzdanost *Interpersonalne majndfulnes skale* proverena je izračunavanjem Krombahove alfe, ICC, konvergentna i diskriminativna validnost su proverene izračunavanjem Pirsonovog koeficijenta korelacije.

Rezultati istraživanja

Krombahova alfa

Vrednosti koeficijenata interne konzistencije *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) i njenih supskala *Svest o sebi i drugima*, *Usredsređenost*, *Prihvatanje bez osude* i *Nereagovanje* prikazane su u Tabeli 1.

Tabela 1

Vrednosti Krombahove alfe Interpersonalne majndfulnes skale

	Broj ajtema	Krombahova alfa
Svest o sebi i drugima	10	.78
Usredsređenost	7	.83
Prihvatanje bez osude	4	.69
Nereagovanje	6	.72
Majndfulnes Total	27	.88

Test–retest pouzdanost

Na osnovu ponovljene primene *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) na uzorku od 32 ispitanika utvrđen je test–retest nivo pouzdanosti ove skale. Vrednosti ICC-a i graničnih vrednosti intervala pouzdanosti dati su u Tabeli 2.

Tabela 2

Vrednosti interklasnog koeficijenta korelacije Interpersonalne majndfulnes skale

Interpersonalna majndfulnes skala	*ICC*	95% Interval pouzdanosti		F Test sa vrednošću 0			
		Donja granica	Gornja granica	*F*	*df1*	*df2*	*p*
Svest o sebi i drugima	.65	.27	.83	2.80	31	31	.003
Usredsređenost	.91	.82	.96	11.08	31	31	<.001
Prihvatanje bez osude	.58	.12	.79	2.32	31	31	.011
Nereagovanje	.69	.36	.85	3.19	31	31	.001
Majndfulnes Total	.80	.58	.90	4.81	31	31	<.001

Odnos interpersonalnih majndfulnes veština i kognitivne i afektivne dimenzije majndfulnesa

U Tabeli 3 prikazan je odnos rezultata ostvarenih primenom *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) i *Skale za procenu afektivnih i kognitivnih dimenzija majndfulnesa* (Feldman et al., 2007).

Tabela 3

Pirsonove korelacije rezultata Interpersonalne majndfulnes skale i Skale kognitivnih i afektivnih dimenzija majndfulnesa

Interpersonalna majndfulnes skala		Skala kognitivnih i afektivnih dimenzija majndfulnesa				
		Pažnja	Sadašnjost	Svesnost	Prihvatanje	Total
Svest o sebi i drugima	*r*	.32*	-.01	.53**	.14	.33*
Usredsređenost	*r*	.48**	.48**	.45**	.38**	.61**
Prihvatanje bez osude	*r*	.41**	.24	.58**	.46**	.56**
Nereagovanje	*r*	.32*	-.079	.42**	.36**	.34**
Majndfulnes Total	*r*	.49**	.25	.60**	.39**	.58**

Napomena: ** $p < .01$, * $p < .05$

Odnos stresa i nivoa majndfulnesa u interpersonalnim odnosima

Statistički značajne niske i pozitivne korelacije ostvarene su između rezultata ostvarenih na supskali *Nereagovanje Interpersonalne majndfulnes skale* (Pratscher et al., 2019) i percipiranog deficita samoefikasnosti u oblasti kontrole doživljaja stresa (Tabela 4).

Tabela 4

Pirsonova korelacija nivoa majndfulnesa i percipiranog doživljaja stresa

Interpersonalna majndfulnes skala		Skala percipiranog stresa – 10	
		Percipirana bespomoćnost	Nedostatak samoefikasnosti
Svest o sebi i drugima	*r*	-.03	.19
Usredsređenost	*r*	-.11	.14
Prihvatanje bez osude	*r*	-.19	.16
Nereagovanje	*r*	-.21	**.28***
Majndfulnes Total	*r*	-.17	.26

Napomena: * $p < .05$

Diskusija

Proverom pouzdanosti na nivou supskala i ukupnog broja ajtema *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) utvrđene su, za društvene nauke, zadovoljavajuće vrednosti Krombahove alfe. Najniža vrednost koeficijenta interne konzistencije registrovana je na supskali *Prihvatanje bez*

osude (α = .69), što se predstavlja prihvatljiv nivo pouzdanosti ako se uzme u obzir poželjna vrednost Krombahove alfe (α > .70), kao i da ovu supskalu čine samo četiri ajtema. Najviša vrednost Krombahove alfe utvrđena je na nivou svih 27 ajtema *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) (α = .88). Vrednost Krombahove alfe veća od .90 upućuje na visoku konzistenciju Skale, ali istovremeno predstavlja rizik od ponavljanja ajtema kojima se ispituju isti aspekti predmeta procene, dok nešto niže vrednosti interne konzistencije (.60 – .70) upućuju na raznovrsnost ajtema kojima se obuhvata više aspekata istog konstrukta (Taber, 2018). Na osnovu dobijenih rezultata može se zaključiti da ajtemi *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) pripadaju istom konstruktu, ali i da obuhvataju različite dimenzije oblasti majndfulnesa.

Pored vrednosti Krombahove alfe, za proveru pouzdanosti *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) korišćena je i test–retest tehnika. Kada se pored vrednosti ICC analiziraju podaci o intervalu pouzdanosti, može se zaključiti da je preciznost procene supskalom *Usredsređenost* visoka (*ICC* = .91), odnosno na nivou ukupnog rezultata *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) (*ICC* = .80), zadovoljavajuća. Za preostale supskale (*Svest o sebi i drugima – ICC* = .65, *Prihvatanje bez osude – ICC* = .58 i *Nereagovanje – ICC* = .69), iako su vrednosti interkorelacijskog koeficijenta zadovoljavajuće, pri donošenju zaključaka o nivou njihove pouzdanosti treba uzeti u obzir širok interval opsega valjanosti na uzorku od 32 ispitanika (Koo & Li, 2016).

Umerenom statistički značajnom pozitivnom korelacijom rezultata dobijenih primenom *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) i *Skale kognitivnih i afektivnih dimenzija majndfulnesa* (Feldman et al., 2007) potvrđeno je da se oba instrumenta zasnivaju na istom teorijskom konceptu, ali se njihovom primenom ispituju različite manifestacije tog koncepta.

Supskala *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) *Svest o sebi i drugima* ostvaruje najviši nivo korelacije sa supskalom *Svesnost Skale kognitivnih i afektivnih dimenzija majndfulnesa* (Feldman et al., 2007) (r = .53, p < .001). Takođe, supskala *Usredsređenost Interpersonalne majndfulnes skale* (Pratscher et al., 2019) ostvaruje najviši nivo statistički značajne pozitivne korelacije sa supskalom *Sadašnjost Skale kognitivnih i afektivnih dimenzija majndfulnesa* (Feldman et al., 2007) (r =.48, p < .001). Utvrđenim korelacijama potvrđuje se da obe supskale *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) i njima odgovarajuće supskale *Skale kognitivnih i afektivnih dimenzija majndfulnesa* (Feldman et al., 2007) obuhvataju iste aspekte majndfulnesa, s tom razlikom što se supskalama *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) procenjuju svesnost i voljno usmeravanje pažnje u specifičnom kontekstu međuljudskih odnosa (npr. ajtemi: *Kada razgovaram sa drugom osobom, potpuno se posvetim tome, odnosno pažnju usmerim na razgovor* ili *U napetim trenucima, pri interakciji sa drugom osobom svestan sam svojih osećanja, ali me ona ne obuzimaju, tj. ne ovladaju mojim mišljenjem i postupcima*). Supskale

Interpersonalne majndfulnes skale (Pratscher et al., 2019) *Nereagovanje* (*r* =.42, *p* = .001) i *Prihvatanje bez osude* (*r* = .58, *p* < .001) statistički značajno, pozitivno najviše koreliraju sa supskalom *Svesnost Skale kognitivnih i afektivnih dimenzija majndfulnesa*, na osnovu čega se može pretpostaviti da je inhibiranje impulsivnih reakcija na nova iskustva i uzdržavanje od automatizovane interpretacije novih iskustava tokom ostvarivanja interpersonalnih odnosa povezano sa kapacitetima voljnog usmeravanja pažnje na odabrani sadržaj.

Svesnost i voljno usmeravanje pažnje na mentalne procese, emocije ili aktivnosti čine deo osnovnih komponenata majndfulnesa (Phelan, 2010), koje su u okviru *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) obuhvaćene ajtemima supskala *Svest o sebi i drugima* i *Usredsređenost*. Prethodno sprovedenim istraživanjima utvrđeno je da odgovori ispitanika na grupu ajtema kojima se procenjuje usmerenost pažnje na sagovornika, odnosno *Usredsređenost*, statistički značajno nisko koreliraju sa kvalitetom prijateljskih odnosa, kada se kontroliše uticaj opšteg nivoa majndfunesa. Ovakav rezultat upućuje na zaključak da se rezultat ostvaren na supskali *Usredsređenost* delimično razlikuje u odnosu na opšti nivo majndfulnesa, jer obuhvata voljno usmeravanje pažnje na interpersonalne odnose (Pratscher et al., 2019).

Povezanost majndfulnes koncepta i rezultata dobijenih primenom *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) potvrđena je istraživanjima kojima je utvrđeno da rezultati ostvareni na ovoj skali statistički značajno pozitivno koreliraju sa nivoom majndfulnesa procenjenog *Majndfulnes skalom svesnosti* (*Mindful Attention Awareness Scale*; Brown & Ryan, 2003), *Skalom pet aspekata majndfulnesa* (*Five Facet Mindfulness Questionnaire*; Baer et al. 2006) i *Kentaki inventarom veština majndfulnesa* (*Kentucky Inventory of Mindfulness Skills*; Baer et al. 2004). Takođe, pozitivne statistički značajne korelacije zabeležene su između učinka na *Interpersonalnoj majndfulnes skali* (Pratscher et al., 2019) i nivoa otvorenosti za nova iskustva, savesnosti, ekstrovertnosti, iskrenosti i spremnosti za dogovor (Pratscher et al., 2019).

Odnos stresa i nivoa majndfulnesa u interpersonalnim odnosima

Rezultati procene nivoa majndfulnesa dobijeni upotrebom *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) statistički značajno ne koreliraju sa nivoom stresa procenjenog *Skalom percipiranog stresa – 10* (Cohen et al., 1983; Jovanović & Gavrilov-Jerković, 2015), izuzev na nivou supskale *Nereagovanje* (*r* = .28, *p* = .038) i percipiranog deficita u oblasti kontrole doživljaja stresa. Ova korelacija je statistički značajna, niska i pozitivna. Može se pretpostaviti da je stres koji se javlja kao posledica interpersonalnih odnosa specifičnog karaktera, odnosno da se izostanak veće direktne povezanosti rezultata majndfulnesa u interpersonalnim odnosima i doživljenog stresa može protumačiti delovanjem medijatora, kao što je, na primer, kapacitet samoregulacije u oblasti emocija (Bao et al., 2015).

Majndfulnes predstavlja multidimenzionalan koncept, pa je potrebno razmotriti specifičnosti odnosa pojedinih dimenzija ovog koncepta i doživljaja stresa. Na primer, metaanalizom je utvrđeno da dimenzija *Suzdržavanje od podele iskustava na pozitivna i negativna*, koja odgovara supskali *Prihvatanju bez osude*, kao i dimenzija *Nivo svesnosti*, odnosno voljno usmeravanje pažnje na „sadašnji trenutak", umereno statistički značajno negativno koreliraju sa nivoom anksioznosti i stepenom ispoljavanja simptoma depresije (Carpenter et al., 2019).

Kada je za procenu majndfulnesa korišćena *Majndfulnes skala svesnosti* (Brown & Ryan, 2003; Höfling et al., 2011), stres bio procenjen *Skalom percipiranog stresa – 10* (Cohen et al., 1983), u većini istraživanja utvrđena je statistički značajna negativna korelacija između rezultata ove dve skale (Araas, 2008), pa je tako, na primer, na nekliničkom uzroku koji su činile odrasle osobe iz Kine utvrđeno da stres negativno korelira sa nivoom majndfulnesa. Isti rezultat dobijen je na uzorku adolescenata iz Sjedinjenih Američkih Država (Kechter et al., 2019), zdravstvenih radnika koji rade u primarnoj zdravstvenoj zaštiti u Brazilu (Atanes et al., 2015) i vojnika iz Irana (Valikhani et al., 2020). Upotreba *Majndfulnes skale svesnosti* (Brown & Ryan, 2003) podrazumeva jednodimenzionalni pristup, odnosno procenu nivoa majndfulnesa orijentisanu na voljno usmeravanje pažnje na „sadašnji trenutak", koja ne obuhvata prihvatanje, empatiju i druge komponente majndfulnes koncepta. U jednom od retkih istraživanja u kojem je izostala direktna negativna povezanost nivoa majndfulnesa i stresa, majndfulnes je procenjen *Skalom za procenu interpersonalnih majndfulnes veština u podučavanju* (*Interpersonal Mindfulness in Teaching Scale*; Frank et al., 2016), koja omogućava sagledavanje majndfulnesa u kontekstu interpersonalnih odnosa. Utvrđeno je da je nivo majndfulnesa medijator između stresa i kvaliteta interpersonalnih odnosa. Autori navode da nivo majndfulnesa može protektivno da deluje na kapacitet učitelja za pružanje emocionalne podrške učenicima, budući da povećani napori nastavnika da pruže emocionalnu podršku mogu da uzrokuju viši nivo stresa, što za posledicu ima veću upotrebu majndfulnesa kao strategije samoregulacije (Molloy Elreda et al., 2019).

Odnos stresa i majndfulnesa Moreira i Kanavaro (Moreira & Canavaro, 2017) objašnjavaju dvema pretpostavkama. Prva je da što je pažnja roditelja usmerenija na dete, on je svesniji njegovih emocija, što zahteva veće angažovanje kapaciteta samoregulacije, ali i dovodi do pozitivnijih iskustava, odnosno nižeg nivoa stresa. Druga pretpostavka predstavlja suprotan primer, jer polazi od roditelja koji usled već primarno prisutnog stresa nije u mogućnosti da posveti pažnju detetu, što dovodi do nerazumevanja na relaciji roditelj – dete, negativnih emocija i indukcije dodatnog stresa. *Interpersonalna majndfulnes skala* (Pratscher et al., 2019) je instrument koji na širem nivou obuhvata međuljudske odnose, tako da možemo da pretpostavimo da je, kada se razmatra odnos

stresa i majndfulesa prema strukturi ajtema *Interpersonalna majndfulnes skala* (Pratscher et al., 2019) bliža *Skali za procenu interpersonalnih majndfulnes veština u podučavanju* (Frank et al. 2016) i *Skali majndfulnes interpersonalnih veština u roditeljstvu* (*The Interpersonal Mindfulness in Parenting Scale* (Duncan, 2007; Moreira & Canavaro, 2017), nego *Majndfulnes skala svesnosti*.

Prema dostupnoj literaturi ovo je prvo istraživanje sprovedeno u R. Srbiji kojim je potvrđena validnost i pouzdanost instrumenta kojim se procenjuje nivo ispoljavanja majndfulnesa tokom ostvarivanja i održavanja socijalnih odnosa. Metodološka ograničenja ove studije vezana su za relativno mali broj ispitanika. Takođe, uzorak nije ujednačen po polu. Većinu ispitanika čine osobe ženskog pola. Jedan od razloga ovakve polne strukture uzorka je mali broj osoba muškog pola koji se školuju za rad sa osobama sa smetnjama u razvoju, što odgovara i nesrazmernom broju muškaraca koji obavljaju posao defektologa. Preporuka za dalja istraživanja je primena *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) u kombinaciji sa drugim instrumentima kako bi se utvrdio uticaj majndfulesa na kvalitet odnosa na relaciji učenik sa ometenošću – defektolog/nastavnik.

Zaključak

Interpersonalna majndfulnes skala predstavlja na samoizveštavanju zasnovan instrument, koji je jednostavan za upotrebu i čija primena ne zahteva više od 30 minuta. Ovim istraživanjem utvrđeno je da su vrednosti interne konzistencije ove skale i njenih supskala prihvatljive. Na osnovu rezultata provere pouzdanosti i validnosti (stabilnosti rezultata u uzastopnim merenjima i rezultata procene konvergentne i diskriminativne validnosti), može se preporučiti upotreba *Interpersonalne majndfulnes skale* (Pratscher et al., 2019) kao instrumenta kojim se dobijaju pouzdani podaci o kvalitetu i nivou majndfulnesa koji se manifestuje u ostvarivanju socijalnih odnosa.

Zahvalnica

Zahvaljujemo En Betenkort (Ann Bettencourt) na odobrenju za upotrebu *Interpersonalne majndfulnes skale* i podršci tokom pisanja rada.

Literatura

Araas, T. E. (2008). *Associations of mindfulness, perceived stress, and health behaviors in college freshmen*. Arizona State University.

Atanes, A., Andreoni, S., Hirayama, M. S., Montero-Marin, J., Barros, V. V., Ronzani, T. M., Kozasa, H., E., Soler, J., Cebolla, A., Garcia-Campayo, J. & Demarzo, M. M. (2015). Mindfulness, perceived stress, and subjective well-being: A correlational study in primary care health professionals. *BMC Complementary and Alternative Medicine*, *15*(1), Article 303. https://doi.org/10.1186/s12906-015-0823-0

Baer, R., Crane, C., Miller, E., & Kuyken, W. (2019). Doing no harm in mindfulness-based programs: Conceptual issues and empirical findings. *Clinical Psychology Review*, *71*, 101-114. https://doi.org/10.1016/j.cpr.2019.01.001

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report the Kentucky inventory of mindfulness skills. *Assessment*, *11*(3), 191-206. https://doi.org/10.1177/1073191104268029

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, *13*(1), 27-45. https://doi.org/10.1177/1073191105283504

Bao, X., Xue, S., & Kong, F. (2015). Dispositional mindfulness and perceived stress: The role of emotional intelligence. *Personality and Individual Differences*, *78*, 48-52. https://doi.org/10.1016/j.paid.2015.01.007

Borsboom, D., Mellenbergh, G. J., & Van Heerden, J. (2004). The concept of validity. *Psychological Review*, *111*(4), 1061-1071. https://doi.org/10.1037/0033-295X.111.4.1061

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*(4), 822-848. https://doi.org/10.1037/0022-3514.84.4.822

Bruton, A., Conway, J. H., & Holgate, S. T. (2000). Reliability: What is it, and how is it measured? *Physiotherapy*, *86*(2), 94-99. https://doi.org/10.1016/S0031-9406(05)61211-4

Buchheld, N., Grossman, P., & Walach, H. (2001). Measuring mindfulness in insight meditation (vipassana) and meditation-based psychotherapy: The development of the Freiburg Mindfulness Inventory (FMI). *Journal for Meditation and Meditation Research*, *1*(1), 11-34.

Burgoon, J. K., Berger, C. R., & Waldron, V. R. (2000). Mindfulness and interpersonal communication. *Journal of Social Issues*, *56*(1), 105-127. https://doi.org/10.1111/0022-4537.00154

Cardaciotto, L., Herbert, J. D., Forman, E. M., Moitra, E., & Farrow, V. (2008). The assessment of present-moment awareness and acceptance: The Philadelphia Mindfulness Scale. *Assessment*, *15*(2), 204-223. https://doi.org/10.1177/1073191107311467

Carpenter, J. K., Conroy, K., Gomez, A. F., Curren, L. C., & Hofmann, S. G. (2019). The relationship between trait mindfulness and affective symptoms: A meta-analysis of the Five Facet Mindfulness Questionnaire (FFMQ). *Clinical Psychology Review*, *74*, Article 101785. https://doi.org/10.1016/j.cpr.2019.101785

Cavanagh, K., Strauss, C., Forder, L., & Jones, F. (2014). Can mindfulness and acceptance be learnt by self-help?: A systematic review and meta-analysis of mindfulness and acceptance-based self-help interventions. *Clinical Psychology Review*, *34*(2), 118-129. http://dx.doi.org/10.1016/j.cpr.2014.01.001

Chadwick, P., Hember, M., Symes, J., Peters, E., Kuipers, E., & Dagnan, D. (2008). Responding mindfully to unpleasant thoughts and images: Reliability and validity of the Southampton mindfulness questionnaire (SMQ). *British Journal of Clinical Psychology*, *47*(4), 451-455. https://doi.org/10.1348/014466508X314891

Chadwick, P., Taylor, K. N., & Abba, N. (2005). Mindfulness groups for people with psychosis. *Behavioural and Cognitive Psychotherapy*, *33*(3), 351-359. https://doi.org/10.1017/S1352465805002158

Chambers, R., Gullone, E., & Allen, N. B. (2009). Mindful emotion regulation: An integrative review. *Clinical Psychology Review*, *29*(6), 560-572. https://doi.org/10.1016/j.cpr.2009.06.005

Cohen, S., Kamarch, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*(4), 385-396. https://doi.org/10.2307/2136404

Dorjee, D. (2010). Kinds and dimensions of mindfulness: Why it is important to distinguish them. *Mindfulness*, *1*(3), 152-160. https://doi.org/10.1007/s12671-010-0016-3

Duncan, L. (2007). *Assessment of mindful parenting among parents of early adolescents: Development and validation of the Interpersonal Mindfulness in Parenting Scale* [Doctoral dissertation, The Pennsylvania State University]. ProQuest. https://www.proquest.com/openview/606423d7727f6249231fb12ce9713208/1?pq-origsite=gscholar&cbl=18750

Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J. P. (2007). Mindfulness and emotion regulation: The development and initial validation of the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R). *Journal of Psychopathology and Behavioral Assessment*, *29*(3), 177-190. https://doi.org/10.1007/s10862-006-9035-8

Frank, J. L., Jennings, P. A., & Greenberg, M. T. (2016). Validation of the mindfulness in teaching scale. *Mindfulness*, *7*(1), 155-163. https://doi.org/10.1007/s12671-015-0461-0

Haigh, E. A., Moore, M. T., Kashdan, T. B., & Fresco, D. M. (2011). Examination of the factor structure and concurrent validity of the Langer Mindfulness/Mindlessness Scale. *Assessment*, *18*(1), 11-26. https://doi.org/10.1177/1073191110386342

Hammersley, M. (1987). Some notes on the terms 'validity' and 'reliability'. *British Educational Research Journal*, *13*(1), 73-82. https://doi.org/10.1080/0141192870130107

Höfling, V., Moosbrugger, H., Schermelleh-Engel, K., & Heidenreich, T. (2011). Mindfulness or mindlessness?: A modified version of the Mindful Attention and Awareness Scale (MAAS). *European Journal of Psychological Assessment*, *27*(1), 59-64. https://doi.org/10.1027/1015-5759/a000045

Jovanović, V., & Gavrilov-Jerković, V. (2015). More than a (negative) feeling: Validity of the Perceived Stress Scale in Serbian clinical and non-clinical samples. *Psihologija*, *48*(1), 5-18. https://doi.org/10.2298/PSI1501005J

Kechter, A., Black, D. S., Riggs, N. R., Warren, C. M., Ritt-Olson, A., Chou, C. P., & Pentz, M. A. (2019). Factors in the perceived stress scale differentially associate with mindfulness disposition and executive function among early adolescents. *Journal of Child and Family Studies*, *28*(3), 814-821. https://doi.org/10.1007/s10826-018-01313-4

Kohls, N., Sauer, S., & Walach, H. (2009). Facets of mindfulness–results of an online study investigating the Freiburg mindfulness inventory. *Personality and Individual Differences*, *46*(2), 224-230. https://doi.org/10.1016/j.paid.2008.10.009

Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine*, *15*(2), 155-163. https://doi.org/10.1016/j.jcm.2016.02.012

Lau, M. A., Bishop, S. R., Segal, Z. V., Buis, T., Anderson, N. D., Carlson, L., Shapiro, S., Carmody, J., Abbey, S., & Devins, G. (2006). The Toronto mindfulness scale: Development and validation. *Journal of Clinical Psychology*, *62*(12), 1445-1467. https://doi.org/10.1002/jclp.20326

Manusov, V., Stofleth, D., Harvey, J. A., & Crowley, J. P. (2020). Conditions and consequences of listening well for interpersonal relationships: Modeling active-empathic listening, social-emotional skills, trait mindfulness, and relational quality. *International Journal of Listening*, *34*(2), 110-126. https://doi.org/10.1080/10904018.2018.1507745

Medvedev, O. N., Pratscher, S. D., & Bettencourt, A. (2020). Psychometric evaluation of the interpersonal mindfulness scale using Rasch analysis. *Mindfulness*, *11*(8), 2007-2015. https://doi.org/10.1007/s12671-020-01415-5

Molloy Elreda, L., Jennings, P. A., DeMauro, A. A., Mischenko, P. P., & Brown, J. L. (2019). Protective effects of interpersonal mindfulness for teachers' emotional supportiveness in the classroom. *Mindfulness*, *10*(3), 537-546. https://doi.org/10.1007/s12671-018-0996-y

Moreira, H., & Canavarro, M. C. (2017). Psychometric properties of the Interpersonal Mindfulness in Parenting Scale in a sample of Portuguese mothers. *Mindfulness*, *8*(3), 691-706. https://doi.org/10.1007/s12671-016-0647-0

Pallant, J. (2013). *SPSS survival manual*. McGraw-hill education.

Phelan, J. P. (2010). Mindfulness as presence. *Mindfulness*, *1*(2), 131-134. https://doi.org/10.1007/s12671-010-0015-4

Pratscher, S. D., Rose, A. J., Markovitz, L., & Bettencourt, A. (2018). Interpersonal mindfulness: Investigating mindfulness in interpersonal interactions, co-rumination, and friendship quality. *Mindfulness*, *9*(4), 1206-1215. https://doi.org/10.1007/s12671-017-0859-y

Pratscher, S. D., Wood, P. K., King, L. A., & Bettencourt, B. (2019). Interpersonal mindfulness: Scale development and initial construct validation. *Mindfulness*, *10*(6), 1044-1061. https://doi.org/10.1007/s12671-018-1057-2

Reavley, N., & Pallant, J. F. (2009). Development of a scale to assess the meditation experience. *Personality and Individual Differences*, *47*(6), 547-552. https://doi.org/10.1016/j.paid.2009.05.007

Solloway, S. G., & Fisher Jr, W. P. (2007). Mindfulness in measurement: Reconsidering the measurable in mindfulness practice. *International Journal of Transpersonal Studies*, *26*(1), 58-81.

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*(6), 1273-1296. https://doi.org/10.1007/s11165-016-9602-2

Valikhani, A., Kashani, V. O., Rahmanian, M., Sattarian, R., Rahmati Kankat, L., & Mills, P. J. (2020). Examining the mediating role of perceived stress in the relationship between mindfulness and quality of life and mental health: testing the mindfulness stress buffering model. *Anxiety, Stress, & Coping*, *33*(3), 311-325. https://doi.org/10.1080/10615806.2020.1723006

Walach, H., Buchheld, N., Buttenmüller, V., Kleinknecht, N., & Schmidt, S. (2006). Measuring mindfulness - the Freiburg mindfulness inventory (FMI). *Personality and Individual Differences*, *40*(8), 1543-1555. https://doi.org/10.1016/j.paid.2005.11.025

Weir, J. P. (2005). Quantifying test-retest reliability using the intraclass correlation coefficient and the SEM. *The Journal of Strength & Conditioning Research*, *19*(1), 231-240. https://doi.org/10.1519/15184.1

The level of mindfulness in interpersonal relationships – the validity and reliability of the assessment scale

Bojan Z. Dučić, Svetlana S. Kaljača

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

Introduction. The multidimensional concept of mindfulness includes voluntary attention, focus on the "present moment", monitoring of mental processes, and inhibition of impulsive reactions. Examining the impact of the level of mindfulness on the quality of the relationship between the special educator and the student requires an instrument with satisfactory psychometric characteristics. *Objectives.* The goal of this research was to determine the internal consistency, test-retest reliability, convergent and discriminative validity of the Interpersonal mindfulness scale. *Methods*. The reliability of the Interpersonal mindfulness scale was checked by calculating Cronbach's alpha in a sample of 114 students (age: $M = 20.75$, $SD = 2.20$). For the test-retest reliability check, a sample of 32 students was formed (age: $M = 21.41$, $SD = 2.46$). The relationship between the Interpersonal mindfulness scale and the Cognitive and affective mindfulness scale was determined in a sample of 59 students (age: $M = 20.93$, $SD = 1.92$). For examining the Pearson correlations of the Interpersonal mindfulness scale and the Perceived Stress Scale–10, the sample included 55 students (age: $M = 20.55$, $SD = 2.47$). *Results*. It was determined that the values of the internal consistency of the Interpersonal mindfulness scale and its subscales were acceptable ($\alpha = .69 – .88$), the level of test-retest reliability was moderate to high ($ICC = .58 –.91$), the correlation with the overall results of the Cognitive and affective mindfulness scale was statistically significant and positive ($r = .58$, $p < .001$), while it was not statistically significant ($p > .05$) on the Perceived Stress Scale–10. *Conclusion*. Based on the established reliability and validity, the Interpersonal mindfulness scale can be recommended as an instrument for obtaining reliable data on the quality and level of mindfulness manifested in social interactions.

Keywords: mindfulness, interpersonal relations, validity, reliability

PRIMLJENO: 21.09.2022.
REVIDIRANO: 28.11.2022.
PRIHVAĆENO: 01.12.2022.

SPECIJALNA EDUKACIJA I REHABILITACIJA
2023, Vol. 22, Br. 1, str. 75-93

UDK: 159.922-056.31-053.8
616.899.2
Originalan naučni rad
DOI: https://doi.org/10.5937/specedreh22-39488

Socijalna kognicija kod odraslih osoba s lakom intelektualnom ometenošću, dualnim dijagnozama i osoba tipičnog razvoja

Bojana R. Mastilo

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

Uvod: Socijalna kognicija je multidimenzionalni konstrukt koji obuhvata kognitivne procese višeg reda koji se koriste za obradu i tumačenje socijalnih informacija i uspješnu komunikaciju sa drugim osobama. Ovi procesi uključuju kognitivnu teoriju uma, afektivnu teoriju uma, razumijevanje socijalnih normi, moralno rasuđivanje i empatiju. *Cilj*: Cilj našeg istraživanja je da se utvrde razlike u socijalnoj kogniciji kod odraslih osoba sa lakom intelektualnom ometenošću, dualnim dijagnozama i osoba tipičnog razvoja, ujednačenih prema hronološkom uzrastu, te da se utvrdi veza između starosti, pola i sposobnosti socijalne kognicije u sve tri ispitivane grupe. *Metode*: Našim istraživanjem obuhvaćeno je 122 ispitanika, od kojih 32 ispitanika sa intelektualnom ometenošću, 30 ispitanika sa dualnim dijagnozama i 60 odraslih ispitanika tipičnog razvoja. Za procjenu socijalne kognicije korišćen je Edinburški test socijalne kognicije, dok je za potvrđivanje prisustva psihijatrijskih simptoma korištena Mini skala psihijatrijske procjene odraslih osoba sa razvojnim poremećajima, MINI PAS – ADD. *Rezultati*: Dobijeni rezultati pokazuju da odrasle osobe sa intelektualnom ometenošću imaju bolje performanse socijalne kognicije od osoba sa dualnim dijagnozama, ali slabije od odraslih osoba tipičnog razvoja. Takođe, istraživanje je pokazalo da u poduzorku ispitanika tipičnog razvoja ove sposobnosti opadaju starenjem, kod osoba sa intelektualnom ometenošću sa godinama opadaju sposobnosti afektivne teorije uma, dok kod osoba sa dualnim dijagnozama nije utvrđena statistički značajna povezanost sa starošću ispitanika. Nije utvrđena značajna veza između pola i socijalne kognicije. *Zaključak*: Utvrđivanjem razvijenosti socijalne kognicije kod odraslih osoba sa intelektualnom ometenošću i dualnim dijagnozama dobijamo uvid u njihovo adaptivno funkcionisanje u svakodnevnim socijalnim interakcijama.

Ključne riječi: socijalna kognicija, teorija uma, intelektualna ometenost, dualne dijagnoze

* Korespondencija: Bojana Mastilo, bojana.mastilo@ues.rs.ba

Uvod

Socijalna kognicija (SK) je multidimenzionalni konstrukt koji obuhvata kognitivne procese višeg reda koji se koriste za obradu i tumačenje socijalnih informacija i uspješnu komunikaciju sa drugim osobama (Adolphs, 2009; Henry et al., 2013). Ovi procesi uključuju kognitivnu teoriju uma (*Theory of Mind* – TOM) (podrazumijeva sposobnost donošenja zaključaka o mislima, namjerama i uvjerenjima drugih osoba), afektivnu TOM (sposobnost donošenja zaključaka o osjećanjima drugih), razumijevanje socijalnih normi, moralno rasuđivanje i empatiju (Baez et al., 2013; Love et al., 2015). Postoje dvije vrste razumijevanja socijalnih normi. Interpersonalno razumijevanje socijalnih normi podrazumijeva uvid u ponašanje drugih osoba u određenoj socijalnoj interakciji, dok se intrapersonalno odnosi na uvid u sopstveno ponašanje tokom određene društvene interakcije (Baksh, Abrahams et al., 2020). Moralno rasuđivanje odnosi se na donošenje sudova o socijalnoj situaciji kroz sagledavanje namjera i posljedica te situacije (Anderson, 2013), dok empatija podrazumijeva razumijevanje i dijeljenje emocionalnog stanja drugih osoba (Proctor & Beail, 2007).

Intelektualna ometenost (IO) je ometenost koju karakterišu ograničenja u intelektualnom funkcionisanju i adaptivnom ponašanju, a koja nastaje prije 22. godine (Shalock et al., 2021). Većina osoba sa IO susreće se sa socijalnim poteškoćama u stvarnom svijetu (Brojčin i sar., 2011; Djordjevic, Glumbić, & Memisevic, 2020) i njihova postignuća na testovima SK su obično ispod kalendarskog ili mentalnog uzrasta (Leffert & Siperstein, 2002).

Intelektualna ometenost je često praćena pridruženim psihijatrijskim stanjima, te se smatra da 30–65% djece i odraslih sa IO ima neki psihijatrijski poremećaj, što predstavlja tri do četiri puta veću zastupljenost nego kod tipične populacije (Dekker et al., 2002; Gobrial, 2019; Linna et al., 1999; Munir, 2016; Peña-Salazar et al., 2020; Platt et al., 2018). Ova pojava koegzistirajuće IO i psihijatrijskog stanja naziva se dualna dijagnoza (DD) (Matson & Sevin, 1994; Sturmey, 2002).

Uvidom u dosadašnja istraživanja SK kod osoba sa IO možemo primjetiti da su pojedinačni aspekti ovog konstrukta češće ispitivani u populaciji djece, nego odraslih osoba (Jacobs & Nader-Grosbois, 2020a, 2020b, 2020c; Jacobs et al., 2020; Leffert & Siperstein, 1996; Thirion-Marissiaux & Nader-Grosbois, 2008). Ovakav trend, s jedne strane, ima smisla s obzirom na to da se temelji razvoja ovih sposobnosti postavljaju u djetinjstvu, ali ne bi trebalo zanemariti ni rezultate studija koji pokazuju da se razvoj SK ne završava u ovom periodu, već se nastavlja u adolescenciji i odraslom dobu (Vetter et al., 2013). Dalje, primjetno je da su istraživanja koja su obuhvatala adolescente i odrasle osobe bila češće usmjerena na ispitivanje sindromskih specifičnosti SK, na primjer kod Prader-Vilijevog sindroma (Dykens et al., 2019; Fernández-Lafitte et al.,

2022), Daunovog sindroma (Pavlova et al., 2018), kao i poremećaja iz spektra autizma (Barendse et al., 2018; Fernandes et al., 2018).

Iako postoji veliki broj istraživanja o SK kod osoba sa psihijatrijskim poremećajima (Jimenez et al., 2019; Silberstein & Harvey, 2019; Vlad et al., 2018), kao i studija koje pokazuju da psihijatrijski simptomi kod ispitanika sa neurodegenerativnim poremećajima (spinocerebelarna ataksija tip 1 i 2) koreliraju sa sposobnostima SK (Tamaš et al., 2021), primjetno je da su relativno rijetke studije koje proučavaju SK u populaciji osoba sa IO i pridruženim psihijatrijskim smetnjama.

Još uvijek nije dovoljno razjašnjeno kako starost utiče na sposobnosti SK, posebno na sposobnosti kognitivne i afektivne TOM (Henry et al., 2013). Neka istraživanja kod odraslih osoba tipičnog razvoja (TR) pokazala su dobne razlike, gdje starije odrasle osobe pokazuju slabija postignuća u poređenju sa mlađim odraslim osobama na testovima za procjenu TOM (Baron-Cohen et al., 2001; Bailey & Henry, 2008; Bailey et al., 2008; Baksh et al., 2018; Duval et al., 2011). S druge strane, Hape i saradnici (Happé et al., 1998) otkrili su poboljšanja u sposobnostima TOM koja nastaju starenjem, a neke studije pronalaze jednaka postignuća mlađih i starijih osoba TR (Keightley et al., 2006; Phillips et al., 2002; Wang & Su, 2006).

Studije u kojima su ispitivane polne razlike u oblasti SK kod ispitanika TR daju nekonzistentne nalaze. Rezultati nekih istraživanja pokazuju da su žene uspješnije na zadacima afektivne TOM od muškaraca (Baksh, Bugeja et al., 2020; Johansson Nolaker et al., 2018). S druge strane, Nevar-Benčura i saradnici (Navarra-Ventura et al., 2018) ukazuju na to da su žene TR, kao i žene sa shizofrenijom, uspješnije u prepoznavanju emocija, ali da pol ipak nije prediktor postignuća na zadacima TOM kod ispitanika sa psihijatrijskim poremećajima.

Analizom dostupne literature nismo pronašli studije koje su ispitivale uticaj starosti i pola na SK kod odraslih osoba sa IO i DD.

Cilj istraživanja

Cilj istraživanja je da se utvrde razlike u SK kod odraslih osoba sa IO, DD i osoba TR, ujednačenih prema hronološkom uzastu, kao i da se utvrdi veza između starosti, pola i sposobnosti SK u sve tri ispitivane grupe.

Metode

Uzorak

Istraživanjem je obuhvaćeno 122 ispitanika, od kojih 32 sa lakom IO, 30 ispitanika sa lakom IO i pridruženom psihijatrijskom dijagnozom – DD i 60 odraslih ispitanika TR.

Uključujući kriterijumi za formiranje grupe ispitanika sa IO bili su uzrast između 20 i 55 godina, laka IO i odsustvo psihijatrijskih simptoma na osnovu primjene Mini skale psihijatrijske procjene odraslih osoba sa razvojnim poremećajima, MINI PAS – ADD (*Mini Psychiatric Assessment Schedule for Adults with Developmental Disabilities*, Prosser et al., 1998).

Uključujući kriterijumi za formiranje grupe ispitanika sa DD podrazumijevali su da je ispitanik uzrasta između 20 i 55 godina, da funkcioniše na nivou lake IO, da ima postavljenu dijagnozu psihijatrijskog poremećaja i da ispoljava prisustvo simptoma psihijatrijskih poremećaja na skali MINI PAS – ADD (Prosser et al., 1998).

Za formiranje grupe ispitanika TR uključujući kriterijumi su se odnosili na to da je ispitanik uzrasta između 20 i 55 godina, da ima prosječnu inteligenciju, što je utvrđeno Ravenovim progresivnim matricama (Raven, 2000), i da je bez dijagnostikovanih psihijatrijskih bolesti.

Isključujući kriterijumi za sve tri grupe bili su: teško oštećenje sluha i vida, dvojezičnost i traumatske povrede mozga. Ispitanici iz svih grupa ujednačeni su u odnosu na pol i uzrast.

Starosna dob svih ispitanika kretala se od 20 do 53 godine (N = 122, AS = 36.76, SD = 10.86). U poduzorku ispitanika sa IO starosna dob bila je u rasponu od 20 do 52 godine (n = 32, AS = 32.53, SD = 1.60), kod ispitanika sa DD od 20 do 53 godine (n = 30, AS = 37.86, SD = 12.32) i u grupi ispitanika TR od 19 do 53 godine (n = 60, AS = 36.86, SD = 11.06). Jednofaktorskom analizom varijanse nije utvrđena statistički značajna razlika ispitivanih poduzoraka u odnosu na starost (F(2,119) = .36, p > .05). U Tabeli 1 prikazana je struktura ispitanika u odnosu na pol.

Tabela 1

Struktura poduzoraka u odnosu na pol

Poduzorak	Pol	*n*	%
Ispitanici sa IO	Muški	18	56.3
	Ženski	14	43.7
	Ukupno	32	100.0
Ispitanici sa DD	Muški	14	46.7
	Ženski	16	53.3
	Ukupno	30	100.0
Ispitanici TR	Muski	29	48.3
	Ženski	31	51.7
	Ukupno	60	100.0

Primjenom Hi kvadrat testa utvrđeno je da unutar poduzoraka nema statistički značajnih razlika u odnosu na pol (grupa ispitanika TR: χ^2 = .07, df = 1, p > .05; grupa ispitanika sa IO: χ^2 = .50, df = 1, p > .05; grupa ispitanika sa DD: χ^2 = .13, df = 1, p > .05).

Instrumenti istraživanja

Za procjenu SK korišten je Edinburški test socijalne kognicije (*Edinburgh Social Cognition Test* – ESCoT, Baksh et al., 2018). ESCoT mjeri četiri sposobnosti SK: kognitivnu TOM, afektivnu TOM, interpersonalno razumijevanje socijalnih normi i intrapersonalno razumijevanje socijalnih normi. Sastoji se od 11 dinamičnih socijalnih interakcija u stilu crtanih filmova (animacija) i svaka traje oko 30 sekundi. Prva animacija je vježba, sledećih pet animacija uključuje kršenje društvenih normi i poslednjih pet prikazuju svakodnevne socijalne interakcije u kojima se ne krše socijalne norme. Nakon gledanja animacije ispitanici treba da opišu šta se dogodilo u prikazanoj socijalnoj interakciji.

Ispitanicima se zatim postavljaju po četiri pitanja koja se odnose na svaki od domena SK. Odgovori se ocjenjuju sa 0, 1, 2 ili 3 boda. Ukoliko na svakom pitanju ispitanik ima maksimalan broj poena, dobija 12 bodova za svaku socijalnu interakciju. Ukupna maksimalna ocjena svakog subtesta je 30, a ukupna maksimalna ocjena za test u cjelini je 120 bodova. Viši skorovi ukazuju na bolje razvijene sposobnosti SK. Za zadavanje ESCoT testa potrebno je 20–25 minuta. Po dobijanju saglasnosti od autora, test je preveden sa engleskog na srpski jezik korištenjem metode duplog slijepog prevoda. Originalna verzija instrumenta prevedena je na srpski jezik, a zatim je srpsku verziju prevoda druga osoba ponovo prevela na engleski jezik. Te dvije verzije su upoređene i nakon unijetih ispravki dobijena je konačna forma testa. Pouzdanost unutrašnje konzistentnosti ESCoT testa na našem uzorku prikazana je u Tabeli 2.

Tabela 2

Pouzdanost unutrašnje konzistencije ESCoT testa

Subskale	Broj ajtema	Kronbahova alfa
ESCoT – kognitivna TOM	10	.93
ESCoT – afektivna TOM	10	.93
ESCoT – interpersonalno razumijevanje socijalnih normi	10	.93
ESCoT – intrapersonalno razumijevanje socijalnih normi	10	.92
ESCoT – ukupan skor	40	.98

Za potvrđivanje prisustva psihijatrijskih simptoma korištena je Mini skala psihijatrijske procjene odraslih osoba sa razvojnim poremećajima, MINI PAS – ADD, koja je namjenjena za identifikaciju psihijatrijskih stanja, ali ne i za potpunu dijagnostičku procjenu. Skala se sastoji od 86 ajtema (psihijatrijskih simptoma) raspoređenih u sedam subskala: Depresija (20 ajtema), Anksioznost i fobije (16 ajtema), Manija (10 ajtema), Opsesivno-kompulzivni poremećaj (pet ajtema), Psihoza (osam ajtema), Nespecifikovani poremećaj (uključujući demenciju) (pet ajtema) i Poremećaj iz spektra autizma (17 ajtema). Po dobijanju saglasnosti autora skala je prevedena na srpski jezik metodom duplog slijepog prevoda. Pouzdanost unutrašnje konzistencije MINI PAS – ADD skale data je u Tabeli 3.

Tabela 3

Pouzdanost unutrašnje konzistencije skale MINI PAS – ADD

Subskale	Broj ajtema	Kronbahova alfa
Depresija	20	.87
Anksioznost	16	.80
Manija	10	.75
Opsesivno-kompulzivni poremećaj	5	.72
Psihoza	8	.88
Nespecifikovani poremećaj	5	.75
Poremećaj iz spektra autizma	17	.89

Ravenove progresivne matrice (Raven, 2000) su instrument koji se koristi za mjerenje generalnog faktora inteligencije i sastoji se od 60 neverbalnih zadataka koji su organizovani u pet serija. Skorovi postignuti na testu predstavljali su uključujući kriterijum za ispitanike sa IO (pripadaju kategoriji ispodprosječnih) i kao isključujući kriterijum za ispitanike TR (pripadaju kategoriji prosječnih i iznadprosječnih). Kronbahov alfa koeficijent je visok i iznosi .96 (Raven, 2000). Za potrebe ovog istraživanja diplomirani defektolog koristio je Ravenove progresivne matrice, zadajući ih individualno.

Procedura istraživanja

Nakon dobijanja saglasnosti Etičkog komiteta Medicinskog fakulteta u Foči (broj: 01-2-19/2021), kao i pojedinačnih saglasnosti svakog ispitanika, istraživanje je realizovano tokom 2021. godine u ustanovama socijalne zaštite, zdravstvenim i obrazovnim ustanovama, kao i udruženjima i društvima za pomoć osobama sa IO na teritoriji Bosne i Hercegovine.

Obrada podataka

Za opis parametara od značaja, u zavisnosti od njihove prirode, korišćene su srednje vrijednosti, procenti, medijane, standardne devijacije, kao i standardne greške prosjeka. Za dalju obradu podataka korišćeni su: hi kvadrat test, Man-Vitnijev U test, jednofaktorska analiza varijanse, Šefeov naknadni test. Za ispitivanje veza između promjenljivih korišten je Spirmanov koeficijent korelacije. Analiza i statistička obrada podataka izvršene su pomoću paketa namjenjenog statističkoj obradi podataka za društvene nauke (*SPSS for Windows, version 20.0*).

Rezultati

U Tabeli 4 prikazana su postignuća sve tri grupe ispitanika na subskalama ESCoT testa, izražena kroz srednju vrijednost postignuća, standardnu devijaciju i standardnu grešku prosjeka. Prikazane prosječne vrijednosti sugerišu da ispitanici sa DD ostvaruju slabije rezultate na svim subskalama ESCoT testa

od ispitanika sa IO, kao i da ispitanici TR ostvaruju bolje rezultate u odnosu na poduzorak ispitanika sa IO, kao i grupu ispitanika sa DD.

Tabela 4

Deskriptivni prikaz postignuća za sve tri grupe ispitanika na subskalama ESCoT testa

Subskale	Poduzorak	*n*	*AS*	*SD*	SE_{AS}
ESCoT – kognitivna TOM	Ispitanici sa IO	32	19.84	5.15	.81
	Ispitanici sa DD	30	13.10	4.99	.91
	Ispitanici TR	60	24.46	2.34	.30
ESCoT – afektivna TOM	Ispitanici sa IO	32	19.31	4.41	.78
	Ispitanici sa DD	30	12.46	4.76	.87
	Ispitanici TR	60	24.85	2.48	.32
ESCoT – interpersonalno razumijevanje socijalnih normi	Ispitanici sa IO	32	19.03	4.47	.79
	Ispitanici sa DD	30	10.90	4.76	.87
	Ispitanici TR	60	23.61	2.55	.33
ESCoT – intrapersonalno razumijevanje socijalnih normi	Ispitanici sa IO	32	19.31	4.49	.79
	Ispitanici sa DD	30	13.20	3.96	.82
	Ispitanici TR	60	23.33	2.65	.34
ESCoT – ukupan skor	Ispitanici sa IO	32	77.50	18.00	3.18
	Ispitanici sa DD	30	49.70	16.82	3.07
	Ispitanici TR	60	96.25	23.48	2.12

Za testiranje razlika u postignućima na subskalama ESCoT testa korišćena je jednofaktorska analiza varijanse (ANOVA), koja je pokazala da postoje statistički značajne razlike u postignućima poduzorka ispitanika sa IO, DD i TR na svim subskalama ESCoT testa (Tabela 5).

Tabela 5

Razlike između ispitivanih grupa na subskalama ESCoT testa

Subskale	*F (2, 119)*	*p*
ESCoT – kognitivna TOM	82.66	<.001
ESCoT – afektivna TOM	113.67	<.001
ESCoT – interpersonalno razumijevanje socijalnih normi	115.66	<.001
ESCoT – intrapersonalno razumijevanje socijalnih normi	81.99	<.001
ESCoT – ukupan skor	112.02	<.001

Primjenom Šefeovog naknadnog testa utvrđeno je između kojih grupa na procenjivanim varijablama postoje statistički značajne razlike (Tabela 6). Dobijeni rezultati pokazuju da statistički značajne razlike postoje na svim subskalama ESCoT testa između ispitanika TR i ispitanika sa IO, poduzorka TR i ispitanika sa DD, kao i između poduzorka ispitanika sa IO i DD.

Tabela 6

Utvrđivanje razlika između poredbenih grupa na subskalama ESCoT testa

Subskale	Poredbene grupe	Razlika AS	SE_{dif}	*p*
ESCoT – kognitivna TOM	TR – IO	4.62	.86	<.001
	TR – DD	11.36	.88	<.001
	IO – DD	6.74	1.00	<.001
ESCoT – afektivna TOM	TR – IO	5.53	5.53	<.001
	TR – DD	12.38	.82	<.001
	IO – DD	6.84	.94	<.001
ESCoT – interpersonalno razumijevanje socijalnih normi	TR – IO	4.58	.81	<.001
	TR – DD	12.71	.83	<.001
	IO – DD	8.13	.95	<.001
ESCoT – intrapersonalno razumijevanje socijalnih normi	TR – IO	4.02	.77	<.001
	TR – DD	10.13	.79	<.001
	IO – DD	6.11	.90	<.001
ESCoT – ukupan skor	TR – IO	18.75	3.05	<.001
	TR – DD	46.55	3.11	<.001
	IO – DD	27.80	3.54	<.001

Napomena: Razlika AS – razlika aritmetičkih sredina, SE_{dif} – standardna greška razlike

Tabela 7

Prikaz rezultata postignuća na ESCoT testu u odnosu na starost

Subskale	Poduzorak	*n*	Spirmanov koeficijent korelacije (ρ)
ESCoT – kognitivna TOM	Ispitanici sa IO	32	-.26
	Ispitanici sa DD	30	-.17
	Ispitanici TR	60	-.57**
ESCoT – afektivna TOM	Ispitanici sa IO	32	-.45*
	Ispitanici sa DD	30	-.35
	Ispitanici TR	60	-.62**
ESCoT – interpersonalno razumijevanje socijalnih normi	Ispitanici sa IO	32	-.27
	Ispitanici sa DD	30	-.12
	Ispitanici TR	60	-.64**
ESCoT – intrapersonalno razumijevanje socijalnih normi	Ispitanici sa IO	32	-.25
	Ispitnici sa DD	30	-.18
	Ispitanici TR	60	-.53**
ESCoT – ukupan skor	Ispitnici sa IO	32	-.31
	Ispitanici sa DD	30	-.23
	Ispitanici TR	60	-.62**

Napomena: * $p < .05$, ** $p < .01$

Za utvrđivanje povezanosti između postignuća na ESCoT testu i starosne dobi korišten je Spirmanov koeficijent korelacije rangova (Tabela 7). Dobijene su statistički značajne negativne veze između SK sposobnosti i uzrasta u grupi

ispitanika TR (na svim subskalama i skali u cjelini), kao i ispitanika sa IO na subskali kojom se procjenjuje afektivna TOM.

U Tabeli 8 dat je deskriptivni prikaz rezultata postignuća na ESCoT testu izražen kroz aritmetičku sredinu, standardnu devijaciju i standardnu grešku prosjeka kod ispitanika muškog i ženskog pola. Vrijednosti aritmetičkih sredina sugerišu da na svim subskalama i skali u cjelini žene postižu bolje rezultate od muškaraca.

Tabela 8

Deskriptivni prikaz rezultata postignuća na ESCoT testu u odnosu na pol

Subskale	Poduzorak	Pol	*n*	*AS*	*SD*	SE_{AS}
ESCoT – kognitivna TOM	Ispitanici sa IO	M	18	18.77	4.84	1.14
		Ž	14	21.21	5.39	1.44
	Ispitanici sa DD	M	14	12.21	5.38	1.43
		Ž	16	13.87	4.66	1.16
	Ispitanici TR	M	29	23.93	2.12	0.39
		Ž	31	24.96	2.46	0.44
ESCoT – afektivna TOM	Ispitanici sa IO	M	18	18.33	4.07	0.95
		Ž	14	20.57	4.66	1.24
	Ispitanici sa DD	M	14	12.07	5.10	1.36
		Ž	16	12.81	4.59	1.14
	Ispitanici TR	M	29	24.62	2.45	0.45
		Ž	31	25.06	2.54	0.45
ESCoT – interpersonalno razumijevanje socijalnih normi	Ispitanici sa IO	M	18	18.72	4.52	1.06
		Ž	14	19.42	4.55	1.21
	Ispitanici sa DD	M	14	10.21	4.94	1.32
		Ž	16	11.50	4.67	1.16
	Ispitanici TR	M	29	23.10	2.48	0.46
		Ž	31	24.09	2.57	0.46
ESCoT – intrapersonalno razumijevanje socijalnih formi	Ispitanici sa IO	M	18	18.27	4.33	1.02
		Ž	14	20.64	4.49	1.20
	Ispitanici sa DD	M	14	12.64	4.70	1.25
		Ž	16	13.60	3.26	0.81
	Ispitanici TR	M	29	22.82	2.66	0.49
		Ž	31	23.80	2.61	0.46
ESCoT – ukupan skor	Ispitanici sa IO	M	18	74.11	17.20	4.05
		Ž	14	81.85	18.69	4.99
	Ispitanici sa DD	M	14	47.14	17.79	4.75
		Ž	16	51.93	16.16	4.04
	Ispitanici TR	M	29	94.44	8.52	1.58
		Ž	31	97.93	9.44	1.69

Napomena: M – muški pol, Ž – ženski pol

Man–Vitnijevim U testom utvrđivane su razlike između muških i ženskih ispitanika na ESCoT testu u poduzorcima ispitanika sa IO, DD i kontrolnoj

grupi. Ni u jednom od poduzoraka nisu pronađene statistički značajne razlike u odnosu na pol (Tabela 9).

Tabela 9

Rezultati postignuća na ESCoT testu u odnosu na pol

Subskale	Poduzorak	Pol	*n*	Man–Vitnijev *U*	*p*
ESCoT – kognitivna TOM	Ispitanici sa IO	M	18	81.00	.086
		Ž	14		
	Ispitanici sa DD	M	14	89.00	.336
		Ž	16		
	Ispitanici TR	M	29	330.50	.075
		Ž	31		
ESCoT – afektivna TOM	Ispitanici sa IO	M	18	77.50	.063
		Ž	14		
	Ispitanici sa DD	M	14	105.00	.770
		Ž	16		
	Ispitanici TR	M	29	396.50	.428
		Ž	31		
ESCoT – interpersonalno razumijevanje socijalnih normi	Ispitanici sa IO	M	18	109.50	.527
		Ž	14		
	Ispitanici sa DD	M	14	84.50	.250
		Ž	16		
	Ispitanici TR	M	29	334.50	.083
		Ž	31		
ESCoT – intrapersonalno razumijevanje socijalnih normi	Ispitanici sa IO	M	18	92.00	.193
		Ž	14		
	Ispitanici sa DD	M	14	91.50	.392
		Ž	16		
	Ispitanici TR	M	29	351.50	.141
		Ž	31		
ESCoT – ukupan skor	Ispitanici sa IO	M	18	91.00	.182
		Ž	14		
	Ispitanici sa DD	M	14	91.00	.382
		Ž	16		
	Ispitanici TR	M	29	329.50	.075
		Ž	31		

Napomena: M – muški pol, Ž – ženski pol

Diskusija

Cilj ovog istraživanja bilo je utvrđivanje razlika u SK kod odraslih osoba sa IO, DD i osoba TR, kao i utvrđivanje veza koje postoje između SK, starosti i pola u sve tri ispitivane grupe.

Rezultati našeg istraživanja pokazali su da poduzorak ispitanika TR ima bolje vještine SK od ispitanika sa IO i DD. Ovakvi nalazi nisu iznenađujući.

Poredeći mlade sa lakom IO i graničnom inteligencijom sa vršnjacima TR, Vejdžmejker i saradnici (Wagemaker et al., 2021) dobijaju da su ispitanici sa IO slabiji od osoba TR na zadacima kojima se procjenjuje TOM, kao i da imaju više poteškoća u tumačenju suptilnih verbalnih nagovještaja i ispoljavanju empatije. Sve to Vejdžmejker i saradnici (Wagemaker et al., 2021) objašnjavaju pojavom da se kod osoba sa IO sporijim tempom razvija TOM. Jirmija i saradnici (Yirmiya et al., 1996), istražujući TOM kod odraslih osoba sa IO i djece TR uparene prema mentalnom uzrastu, pronalaze da odrasle osobe sa IO imaju slabije rezultate od djece TR. Suprotni rezultati naglašavaju da je postignuće odraslih ispitanika sa IO znatno bolje od postignuća adolescenata sa IO (73% uspješnih nasuprot 44%) (Charman et al., 1998). Gor i saradnici (Gore et al., 2010) razloge nižeg postignuća odraslih osoba sa IO u zadacima zauzimanja drugačije perspektive objašnjavaju nižom inteligencijom, ali i nižim verbalnim sposobnostima ovih osoba. Takođe, istraživanja u kojima je procenjivano kako osobe sa IO razumiju socijalne norme pokazuju da su ovi ispitanici značajno slabiji od osoba TR, kao i da ispoljavaju teškoće u predviđanju ishoda u onim situacijama u kojima se krše određene norme te da otežano sagledavaju posledice svojih i tuđih ponašanja (Artemyeva, 2016).

U našem istraživanju poduzorak ispitanika sa IO postiže bolja postignuća od poduzorka ispitanika sa DD na svim subskalama ESCoT testa ($p < .01$). Objašnjenje ovakvih rezultata može se tražiti i u samom prisustvu komorbiditeta. Naime, u jednom sistematskom pregledu u kom su ispitivane vještine SK u različitim kliničkim populacijama (iz metaanaliza u kojima su ispitanici imali neurološke, psihijatrijske i razvojne poremećaje) navodi se da uticaj komorbidnih stanja (npr. anksioznosti, depresije itd.) na SK kod osoba koje se već nalaze u nekoj od kliničkih populacija treba posebno razmotriti. On izgleda ne mora imati presudnu ulogu, ali može doprinositi slabijim vještinama SK (Cotter et al., 2018). Rezultati jednog ranijeg istraživanja TOM prvog i drugog reda kod odraslih osoba sa shizofrenijom, afektivnim poremećajem, IO i DD (IO i shizofrenijom) navode da ispitanici sa DD imaju najslabija postignuća na zadacima TOM drugog reda, koja nastaju kao posljedica nižih sposobnosti verbalnog razumijevanja, sniženog intelektualnog funkcionisanja i prisustva psihotične simptomatologije (Doody et al.,1998). Đorđević i saradnici (Djordjević, Glumbić, & Brojčin, 2020), ispitujući TOM prvog i drugog reda kod odraslih osoba IO i DD, navode da osobe sa IO ostvaruju nešto viša postignuća od ispitanika sa DD, ali te razlike nisu statistički značajne.

Iako su rijetka istraživanja o određenim aspektima SK kod osoba sa DD, rađen je veliki broj istraživanja sa ispitanicima koji imaju psihijatrijske poremećaje. Ova istraživanja pokazuju deficite TOM kod osoba sa bipolarnim poremećajima (Bora et al., 2016; Samamé et al., 2015), shizofrenijom (Achim et al., 2012; Achim et al., 2013; Savla et al., 2013) i psihotičnim poremećajima (Bora et al., 2009; Dorn et al., 2021; Savla et al., 2013). Takođe, istražujući

intrapersonalno razumijevanje socijalnih normi kod ispitanika sa demencijom (Carr et al., 2015), poremećajem iz spektra autizma (Baez et al., 2012), shizofrenijom i bipolarnim poremećajem (Baez et al., 2013), istraživači pronalaze da osobe sa psihijatrijskim smetnjama imaju niža postignuća u procjenjivanim sposobnostima u odnosu na ispitanike TR.

Drugi cilj ovog istraživanja ticao se utvrđivanja odnosa između SK, pola i godina života. Statistički značajne negativne veze dobijene su između sposobnosti SK i uzrasta kod ispitanika TR (na svim subskalama i skali u cjelini), kao i kod ispitanika sa IO na subskali kojom se procenjuje afektivna TOM. Ovi nalazi pokazuju da veštine SK u populaciji osoba TR opadaju sa godinama, dok se kod osoba sa IO to dešava samo u onim vještinama koje se odnose na zaključivanje o osjećanjima drugih osoba. Ranije studije u kojima su ispitivani efekti kalendarskog uzrasta na performanse TOM kod osoba sa IO daju nekonzistentne nalaze. Navodi se da ove vještine generalno opadaju sa godinama (Yirmiya et al., 1998), da je postignuće odraslih ispitanika sa IO znatno bolje od postignuća adolescenata sa IO (73% uspješnih, nasuprot 44%) (Charman et al., 1998), ili da kalendarski uzrast nije značajan prediktor postignuća (Yirmiya et al., 1996). Prema navodima Bakša i saradnika (Baksh et al., 2018) TOM nije jednodimenzionalni koncept i nije neosnovano očekivati da starosna dob korelira samo sa jednim njenim segmentom, kao što je to slučaj u našem istraživanju u populaciji ispitanika sa IO. U korist ove tvrdnje idu i rezultati istraživanja koji pokazuju da efekat starenja u slučaju različitih zadataka TOM nije isti, te da je starenje povezano sa smanjenim učinkom na vizuelnim zadacima (Slessor et al., 2007). U jednom istraživanju se navodi da smanjenje kapaciteta TOM postaje statistički značajno posle 55. godine (Pardini & Nichelli, 2009). Slični nalazi kod ispitanika TR dobijeni su u istraživanjima u kojima su korišteni testovi za procjenu TOM zasnovani na video-materijalu, gde je utvrđeno da starije odrasle osobe imaju znatno slabija postignuća od mlađih (Slessor et al., 2007; Sullivan & Ruffman, 2004). Takođe, studija Bakša i saradnika (Baksh et al., 2018) kod odraslih osoba TR naglašava da starenjem opadaju postignuća na kognitivnoj TOM, afektivnoj TOM, interpersonalnom razumijevanju socijalnih normi i intrapersonalnom razumijevanju socijalnih normi. Međutim, izgleda da veze između godina i TOM nisu tako jednostavne i da između ovih pojava mogu posredovati neke varijable poput inteligencije i verbalnog razumijevanja (Charlton et al., 2009; Maylor et al., 2002, prema Baksh et al., 2018).

Rezultati našeg istraživanja nisu pokazali postojanje statistički značajnih razlika između muškaraca i žena u sva tri poduzorka u pogledu vještina SK, iako su u svim ispitivanim domenima žene postizale nešto bolje rezultate. Slično tome, Navar-Benčura i saradnici (Navarra-Ventura et al., 2017), upoređujući kognitivnu i afektivnu TOM između muških i ženskih ispitanika TR i osoba sa shizofrenijom, dolaze do zaključka da žene imaju blagu prednost u odnosu na muškarce, ali da te razlike nisu statistički

značajne. Neka istraživanja TOM ukazuju na razlike u strategijama koje koriste muškarci i žene prilikom obrade socijalnih informacija. Žene se smatraju jačim „empatizerima", a muškarci jačim „sistematizerima" (Baron-Cohen et al., 2005). Takođe, navodi se da žene više angažuju emocionalne oblasti mozga tokom zadataka SK, tako da je njihova prednost očiglednija na zadacima afektivne TOM (Christov-Moore et al., 2014). Dodatno, neka istraživanja navode da su žene uspješnije od muškaraca u procjenjivanju mentalnih stanja putem izraza lica (Isernia et al., 2020; Kirkland et al., 2013).

Uzimajući u obzir činjenicu da je SK do sada ispitivana uglavnom domenski i uglavnom na populaciji djece, naše istraživanje daje cjelovitiji uvid u ove sposobnosti (TOM, interpersonalno i intrapersonalno razumijevanje socijalnih normi) kod odraslih osoba sa lakom IO i DD. Značaj ovog istraživanja ogleda se u tome što se na osnovu detektovanih oblasti u kojima ispitanici ispoljavaju slabost mogu planirati ciljevi za dalji rad. U skladu sa tim, nalazi ovog istraživanja mogu ohrabriti praktičare da primjenjuju ESCoT test na odraslim osobama sa IO i DD kako bi detektovali njihove snage i potrebu za podrškom. Ograničenja ovog istraživanja ogledaju se u tome što su rezultati o SK dobijeni na uzorku ispitanika koji su koristili neke usluge u zajednici (npr. socijalne zaštite ili nevladinog sektora), te stoga ne možemo sa sigurnošću tvrditi da se oni mogu generalizovati na populaciju odraslih osoba sa IO i DD koje nisu obuhvaćene različitim vidovima podrške u zajednici. Iako su u ovom istraživanju korišćeni animirani snimci za procjenu vještina SK, ipak bi budućim procjenama bilo korisno pridodati i posmatranje odraslih osoba sa IO i DD u konkretnim socijalnim situacijama u kojima se zahtjevaju vještine SK.

Zaključak

Dobijeni razultati ovog istraživanja pokazuju da odrasle osobe sa lakom IO imaju bolje performanse SK od odraslih osoba sa DD, ali slabije od odraslih osoba TR. Takođe, istraživanje je pokazalo da u poduzorku ispitanika TR ove sposobnosti opadaju sa starenjem, kod osoba sa IO sa godinama opadaju sposobnosti afektivne TOM, dok kod osoba sa DD nije utvrđena veza između ovih varijabli. Veza između pola i SK nije utvrđena našim istraživanjem. Utvrđivanjem razvijenosti SK kod odraslih osoba sa IO i DD dobijamo uvid u njihovo adaptivno funkcionisanje u svakodnevnim socijalnim interakcijama. Na osnovu uočenih deficita moguće je kreirati programe treninga SK sposobnosti i time poboljšati funkcionalnost individue u svim aspektima života.

Literatura

Achim, M. A., Ouellet, R., Roy, M. A., & Jackson, P. L. (2012). Mentalising in first-episode psychosis. *Psychiatry Research*, *196*(2-3), 207-213. https://doi.org/10.1016/j.psychres.2011.10.011

Achim, M. A., Ouellet, R., Lavoie, M. A., Vallières, C., Jackson, P. L., & Roy, M. A. (2013). Impact of social anxiety on social cognition and functioning in patients with recent-onset schizophrenia spectrum disorders. *Schizophrenia Research*, *145*(1-3), 75-81. https://doi.org/10.1016/j.schres.2013.01.012

Adolphs, R. (2009). The social brain: Neural basis of social knowledge. *Annual Review of Psychology*, *60*(2), 693-716. https://doi.org/10.1146/annurev.psych.60.110707.163514

Anderson, N. H. (2013). Unified psychology based on three laws of information integration. *Review of General Psychology*, *17*(2), 125-132. https://doi.org/10.1037/a0032921

Artemyeva, T. V. (2016). Normative behavior of adolescents with intellectual disabilities: A qualitative study. *International Journal of Environmental and Science Education*, *11*(7), 1551-1558. https://doi.org/10.12973/ijese.2016.358a

Baez, S., Herrera, E.,Villarin, L.,Theil, D., Gonzalez-Gadea, M., Gomez, P., Mosquera, M., Huepe, D., Strejilevich, S.,Viglieca, N. S., Matthäus, F., Decety, J., Manes, F., & Ibañez, A. M. (2013). Contextual social cognition impairments in schizophrenia and bipolar disorder. *PLOS One*, *8*(3), Article e57664. https://doi.org/10.1371/journal.pone.0057664

Baez, S., Rattazzi, A., Gonzalez-Gadea, M. L., Torralva, T., Vigliecca, N. S., Decety, J., Manes, F., & Ibanez, A. (2012). Integrating intention and context: Assessing social cognition in adults with Asperger syndrome. *Frontiers in Human Neuroscience*, 6, Article 302. https://doi.org/10.3389/fnhum.2012.00302

Bailey, P. E., & Henry, D. J. (2008). Growing less empathic with age: Disinhibition of the self-perspective. *The Journals of Gerontology Series B. Psychological Sciences and Social Sciences*, *63*(4), 219-226. https://doi.org/10.1093/geronb/63.4.p219

Bailey, P. E., Henry, D. J., & Von Hippel, W. (2008). Empathy and social functioning in late adulthood. *Aging and Mental Health*, *12*(4), 499-503. https://doi.org/10.1080/13607860802224243

Baksh, R. A., Abrahams, S., Auyeung, B., & MacPherson, S. E. (2018). The Edinburgh Social Cognition Test (ESCoT): Examining the effects of age on a new measure of theory of mind and social norm understanding. *PloS One*, *13*(4), Article e0195818. https://doi.org/ 10.1371/journal.pone.0195818

Baksh, R. A., Abrahams, S., Bertlich, M., Cameron, R., Jany, S., Dorrian, T., Baron-Cohen, S, Allison, C., Smith, P., MacPherson, S. E., & Auyeing, B. (2020). Social cognition in adults with autism spectrum disorders: Validation of the Edinburgh Social Cognition Test (ESCoT). *The Clinical Neuropsychologist*, *35*(7), 1275-1293. https://doi.org/10.1080/13854046.2020.1737236

Baksh, R. A., Bugeja, T., & MacPherson, S. E. (2020). Executive functions do not underlie performance on the Edinburgh Social Cognition Test (ESCoT) in healthy younger and older adults. *Journal of the International Neuropsychological Society*, *26*(5), 527-538. https://doi.org/10.1017/S1355617719001450

Barendse, E. M., Hendriks, M. P., Thoonen, G., Aldenkamp, A. P., Kessels, R. P. (2018). Social behaviour and social cognition in high-functioning adolescents with autism spectrum disorder (ASD): Two sides of the same coin? *Cognitive Processing*, *19*(4), 545-555. https://doi.org/10.1007/s10339-018-0866-5

Baron-Cohen, S.,Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The ”Reading the Mind in the Eyes” test revised version: A study with normal adults, and adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry*, *42*(2), 241-251.

Baron-Cohen, S., Kinickmeyer, R. S., & Belmonte, M. K. (2005). Sex differences in the brain: Implications for explaining autism. *Science*, *310*(5749), 819-823. https://doi.org/10.1126/science.1115455

Bora, E., Bartholomeusz, C. F., & Pantelis, C. (2016). Meta-analysis of theory of mind (ToM) impairment in bipolar disorder. *Psychological Medicine*, *46*(2), 253-264. https://doi.org/10.1017/S0033291715001993

Bora, E., Yucel, M., & Pantelis, C. (2009). Theory of mind impairment in schizophrenia: Meta-analysis. *Schizophrenia Research*, *109*(1-3), 1-9. https://doi.org/10.1016/j.schres.2008.12.020

Brojčin, B., Banković, S. i Japundža-Milisavljević, M. (2011). Socijalne veštine dece i mladih sa intelektualnom ometenošću. *Nastava i vaspitanje*, *60*(3), 419-429.

Charman, T., Campbell, A., & Edwards, L. S. (1998). Theory of mind performance in children, adolescents, and adults with a mental handicap. *Cognitive Development*, *13*(3), 307-322. https://doi.org/10.1016/S0885-2014(98)90013-2

Carr, A. R., Paholpak, P., Daianu, M., Fong, S. S., Mather, M., Jimenez, E. E., Thomson, P., & Mendez, M. F. (2015). An investigation of care-based vs. rule-based morality in frontotemporal dementia, Alzheimer's disease, and healthy controls. *Neuropsychologia*, *78*(1), 73-79. https://doi.org/10.1016/j.neuropsychologia.2015.09.033

Christov-Moore, L., Simpson, A. E., Coudé, G., Grigaityte, K., Iacoboni, M., & Ferrari, P. F. (2014). Empathy: Gender effects in brain and behavior. *Neuroscience Biobehavioral Reviews*, *46*(4), 604-627. https://doi.org/10.1016/j.neubiorev.2014.09.001

Cotter, J., Granger, K., Backx, R., Hobbs, M., Yen Looi, C., & Barnett, J. H. (2018). Social cognitive dysfunction as a clinical marker: A systematic review of meta-analyses across 30 clinical condition. *Neuroscience & Biobehavioral Reviews*, *84*(2), 92-99. https://doi.org/10.1016/j.neubiorev.2017.11.014

Dekker, M. C., Kott, H. M., van der Ende, J., & Verhulst, F. C. (2002). Emotional and behavioral problems in children and adolescents with and without intellectual disability. *Journal of Child Psychology and Psychiatry*, *43*(8), 1087-1098. https://doi.org/10.1111/1469-7610.00235

Doody, G. A., Gotz, M., Johnstone, E. C., Frith, C. D., & Owens, D. G. (1998). Theory of mind and psychoses. *Psychological Medicine*, *28*(2), 397-405. https://doi.org/10.1017/s003329179700648x

Dorn, L. M. L., Struck, N., Bitsch, F., Falkenberg, I., Kircher, T., Rief, W., & Mehl, S. (2021). The relationship between different aspects of theory of mind and symptom clusters in psychotic disorders: Deconstructing theory of mind into cognitive, affective, and hyper theory of mind. *Frontiers in Psychiatry*, *12*(2), Article 607154. https://doi.org/10.3389/fpsyt.2021.607154

Duval, C., Piolino, P., Bejanin, A., Eustache, F., & Desgranges, B. (2011). Age effects on different components of theory of mind. *Consciousness and Cognition*, *20*(3), 627-642. https://doi.org/10.1016/j.concog.2010.10.025

Dykens, E. M., Roof, E., Hunt-Hawkins, H., Daniell, C., & Jurgensmeyer, S. (2019). Profiles and trajectories of impaired social cognition in people with Prader-Willi syndrome. *PLoS One*, *14*(10), Article e0223162. https://doi.org/10.1371/journal.pone.0223162

Djordjević, M., Glumbić, N., & Brojčin, B. (2020). Irony, deception and theory of mind in people with intellectual disabilities and dual diagnoses. *Vojnosanitetski pregled*, 77(6), 620-630. https://doi.org/10.2298/VSP18214142D

Djordjevic, M., Glumbić, N., & Memisevic, H. (2020). Socialization in adults with intellectual disability: The effects of gender, mental illness, setting type, and level of

intellectual disability. *Journal of Mental Health Research in Intellectual Disabilities*, *13*(4), 364-383. https://doi.org/10.1080/19315864.2020.1815914

Fernandes, J. M., Cajão, R., Lopes, R., Jerónimo, R., & Barahona-Corrêa, J. B. (2018). Social cognition in schizophrenia and autism spectrum disorders: A systematic review and meta-analysis of direct comparisons. *Frontiers in Psychiatry*, *9*, Article 504. https://doi.org/10.3389/fpsyt.2018.00504

Fernández-Lafitte, M., Cob, J., Coronas, R., Parra, I., Oliva, C. J., Alvarez, A., Esteba-Castillo, S., Gimenez-Palop, O., Palao, D. J., & Caixàs, A. (2022). Social responsiveness and psychosocial functioning in adults with Prader-Willi syndrome. *Journal of Clinical Medicine*, *11*, Article 1433. https://doi.org/10.3390/jcm11051433

Gobrial, E. (2019). Comorbid mental health disorders in children and young people with intellectual disabilities and autism spectrum disorders. *Advances in Mental Health and Intellectual Disabilities*, *13*(5), 173-181. https://doi.org/10.1108/AMHID-05-2018-0026

Gore, N. J., Barnes-Holmes, Y., & Murphy, G. (2010). The relationship between intellectual functioning and relational perspective-taking. *International Journal of Psychology and Psychological Therapy*, *10*(1), 1-17.

Happé, F., Winner, E., & Brownell, H. (1998). The getting of wisdom: Theory of mind in old age. *Developmental Psychology*, *34*(2), 358-368. https://doi.org/10.1037//0012-1649.34.2.358

Henry, J., Phillips, L. H., Ruffman, T., & Bailey, P. E. (2013). A meta-analytic review of age differences in theory of mind. *Psychology and Aging*, *28*(3), 826-832. https://doi.org/10.1037/a0030677

Isernia, S., Sokolov, A. N., Fallgatter, A. J., Pavlova, M. A. (2020). Untangling the ties between social cognition and body motion: Gender impact. *Frontiers in Psychology*, *11*, Article 128. https://doi.org/10.3389/fpsyg.2020.00128

Jacobs, E., & Nader-Grosbois, N. (2020a). Theory of mind or social information processing training: Which is the better way to foster social adjustment? *Psychology*, *11*(9), 1420-1454. https://doi.org/10.4236/psych.2020.119091

Jacobs, E., & Nader-Grosbois, N. (2020b). Affective and cognitive theory of mind in children with intellectual disabilities: How to train them to foster social adjustment and emotion regulation. *Journal of Education and Training Studies*, *8*(4), 80-97. https://doi.org/10.11114/jets.v8i4.4757

Jacobs, E., & Nader-Grosbois, N. (2020c). Training social information processing in elementary school children with intellectual disabilities: A key to support their emotion regulation and social behaviors. *Journal of Education and Training Studies*, *8*(6), 7-22. https://doi.org/10.11114/jets.v8i6.4840

Jacobs, E., Simon, P., & Nader-Grosbois, N. (2020). Social cognition in children with non-specific intellectual disability: An exploratory study. *Frontiers in Psychology*, *11*, Article 1884. https://doi.org/10.3389/fpsyg.2020.01884

Jimenez, A. M., Riedel, P., Lee, J., Reavis, E. A., & Green, M. (2019). Linking resting-state networks and social cognition in schizophrenia and bipolar disorder. *Human Brain Mapping*, *40*(16), 4703- 4715. https://doi.org/10.1002/hbm.24731

Johansson Nolaker, E., Murray, K., Happé, F., & Charlton, A. R. (2018). Cognitive and affective associations with an ecologically valid test of theory of mind across the lifespan. *Neuropsychology*, *32*(6), 754-763. https://doi.org/10.1037/neu0000464

Keightley, M. L., Winocur, G., Burianova, A., Hongwanishkul, D., & Grady, C. L. (2006). Age effects on social cognition: Faces tell a different story. *Psychology and Aging*, *21*(3), 558-572. https://doi.org/10.1037/0882-7974.21.3.558

Kirkland, R. A., Peterson, E., Baker, C. A., Miller, S., & Pulos, S. (2013). Meta-analysis reveals adult female superiority in "Reading the Mind in the Eyes" Test. *North American Journal of Psychology*, *15*(1), 121-146.

Leffert, J., & Siperstein, G. (1996). Assessment of social-cognitive processes in children with mental retardation. *American Journal on Mental Retardation*, *100*(5), 441-455.

Leffert, J., & Siperstein, G. (2002). Social cognition: A key to understanding adaptive behavior in individuals with mild mental retardation. *International review of research in mental retardation*, *25*(1), 135-181. https://doi.org/10.1016/S0074-7750(02)80008-8

Linna, S-L., Moilanen, I., Ebeling, H., Piha, J., Kumpulainen, K.,Tamminan, T., & Almqvist, F. (1999). Psychiatric symptoms in children with intellectual disability. *European Child and Adolescent Psychiatry*, *8*(4), 77-82. https://doi.org/10.1007/pl00010704

Love, M. C. N., Ruff, G., & Geldmacher, D. (2015). Social sognition in older adults: A review of reuropsychology, neurobiology, and functional connectivity. *Medical & Clinical Reviews*, *1*(1), 1-8. https://doi.org/10.21767/2471-299X.1000006

Matson, J. M., & Sevin, J. A. (1994). Theories of dual diagnosis in mental retardation. *Journal of Consulting and Clinical Psychology*, *62*(1), 6-16. https://doi.org/10.1037/0022-006X.62.1.6

Munir, K. M. (2016). The co-occurrence of mental disorders in children and adolescents with intellectual disability/intellectual developmental disorder. *Current Opinion in Psychiatry*, *29*(2), 95-102. https://doi.org/10.1097/YCO.0000000000000236

Navarra-Ventura, G., Fernandez-Gonzalo, S., Turon, M., Pousa, E., Palao, D., Cardoner, N., Jodar, M. (2018). Gender differences in social cognition: A cross-sectional pilot study of recently diagnosed patients with schizophrenia and healthy subjects. *The Canadian Journal of Psychiatry*, *63*(8), 538-546. https://doi.org/10.1177/0706743717746661

Pardini, M., & Nichelli, P. F. (2009). Age-related decline in mentalizing skills across adult life span. *Experimental Aging Research*, *35*(1), 98-106. https://doi.org/10.1080/03610730802545259

Pavlova, M. A., Galli, J., Pagani, F., Micheletti, S., Guerreshi, M., Sokolov, A. N., Fallgatter, A. J., & Fazzi, E. M. (2018). Social cognition in Down syndrome: face tuning in face-like non-face images. *Frontiers in Psychology*, *9*, Article 2583. https://doi.org/10.3389/fpsyg.2018.02583

Peña-Salazar, C., Arrufat, F., Manel-Santos, J., Fontanet, A., González-Castro, G., Mas, S., Roura-Poch, P., & Valdés-Stauber, J. (2020). Underdiagnosis of psychiatric disorders in people with intellectual disabilities: Differences between psychiatric disorders and challenging behaviour. *Journal of Intellectual Disabilities*, *24*(3), 326-338. https://doi.org/10.1177/1744629518798259

Phillips, L. H., MacLean, R. D. J., & Allen, R. (2002). Age and the understanding of emotions neuropsychological and sociocognitive perspectives. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *57*(6), 526-530. https://doi.org/10.1093/geronb/57.6.p526

Platt, J. M., Keyes, K. M., McLaughlin, K. A., Kaufman, A. S. (2018). Intellectual disability and mental disorders in a US population representative sample of adolescents. *Psychological Medicine*, *49*(6), 952-961. https://doi.org/10.1017/S0033291718001605

Proctor, T., & Beail, N. (2007). Empathy and theory of mind in offenders with intellectual disability. *Journal of Intellectual and Developmental Disability*, *32*(2), 82-93. https://doi.org/10.1080/13668250701373331

Prosser, H., Moss, S., Costello, M. H., Simpson, N., Patel, P., & Rowe, S. (1998). Reliability and validity of the Mini PAS-ADD for assessing psychiatric disorders in adults with

intellectual disability. *Journal of Intellectual Disability Research*, *42*(4), 264-272. https://doi.org/10.1046/j.1365-2788.1998.00146.x

Raven, J. (2000). The Raven's progressive matrices: Change and stability over culture and time. *Cognitive Psychology*, *41*(1), 1-48. https://doi.org/10.1006/cogp.1999.0735

Samamé, C., Martino, D. K Strejilevich, S. A. (2015). An individual task meta-analysis of social cognition in euthymic bipolar disorders**.** *Journal of Affective Disorder*, *173*(2015), 146-153. https://doi.org/10.1016/j.jad.2014.10.055

Savla, G. N., Vella, L., Armstrong, C. C., Penn, D. L., & Twamley, E. W. (2013). Deficits in domains of social cognition in schizophrenia: A meta-analysis of the empirical evidence. *Schizophrenia Bulletin*, *39*(5), 979-999. https://doi.org/10.1093/schbul/sbs080

Schalock, R. L., Luckasson, R., & Tassé, M. J. (2021). An overview of intellectual disability: Definition, diagnosis, classification, and systems of supports (12th ed.). *American Journal on Intellectual and Developmental Disabilities*, *126*(6), 439-442. https://doi.org/10.1352/1944-7558-126.6.439

Silberstein, J., & Harvey, P. D. (2019). Cognition, social cognition, and self-assessment in schizophrenia: Prediction of different elements of everyday functional outcomes. *CNS Spectrums*, *24*(1), 88-93. htpps://doi.org/10.1017/S1092852918001414

Slessor, G., Phillips, L. H., & Bull, R. (2007). Exploring the specificity of age-related differences in theory of mind tasks. *Psychology and Aging*, *22*(3), 639-643. htpps://doi.org/10.1037/0882-7974.22.3.639

Sturmey, P. (2002). Mental retardation and concurrent psychiatric disorder: Assessment and treatment. *Current Opinion in Psychiatry*, *15*(2), 489-496.

Sullivan, S., & Ruffman, T. (2004). Social understanding: How does it fare with advancing years? *British Journal of Psychology*, *95*(1), 1-18. https://doi.org/10.1348/000712604322779424

Tamaš, O., Kostić, M., Kačar, A., Stefanova, E., Đokić, B. S., Stanisavljević, D., & Dragašević-Mišković, N. (2021). Social cognition in patients with cerebellar neurodegenerative disorders. *Frontiers in Systems Neuroscience*, *15*, Article 664223. https://doi.org/10.3389/fnsys.2021.664223

Thirion-Marissiaux, A-F., & Nader-Grosbois, N. (2008). Theory of mind "beliefs", developmental characteristics and social understanding in children and adolescents with intellectual disabilities. *Research in Developmental Disabilities*, *29*(6), 547-566. https://doi.org/10.1016/j.ridd.2007.09.004

Vetter, N. C., Altgassen, M., Phillips, L., Mahy, C. E. V., & Kliegel, M. (2013). Development of affective theory of mind across adolescence: Disentangling the role of executive functions. *Developmental Neuropsychology*, *38*(2), 114-125. https://doi.org/10.1080/87565641.2012.733786

Vlad, M., Raucher-Chéné, D., Henry, A., & Kaladjan, A. (2018). Functional outcome and social cognition in bipolar disorder: Is there a connection? *European Psychiatry*, *52*(3), 116-125. https://doi.org/10.1016/j.eurpsy.2018.05.002

Wagemaker, E., Dekkers, T., Bexkens, A., Salemink, E., Zadelaar, J., & Huizenga, H. M. (2021). Susceptibility to peer influence in adolescents with mild-to-borderline intellectual disability: investigating links with inhibition, theory of mind and negative interpretation bias. *Journal of Intellectual and Devellopmental Disability*, *47*(4), 376-390. https://doi.org/10.3109/13668250.2022.2066511

Wang, Y., & Su, Y. (2006). Theory of mind in old adults: The performance on Happe's stories and faux pas stories. *Psychologia*, *49*(4), 228-237. https://doi.org/10.1037/a0030876

Yirmiya, N., Solomonica-Levi, D., Shulman, C., & Pilowsky, T. (1996). Theory of mind abilities in individuals with autism, down syndrome, and mental retardation of unknown etiology: The role of age and intelligence. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *37*(8), 1003-1014. https://doi.org/10.1111/j.1469-7610.1996.tb01497.x

Yirmiya, N., Erel, O., Shaked, M., & Solomonica-Levi, D. (1998). Meta-analyses comparing theory of mind abilities of individuals with autism, individuals with mental retardation and normally developing individuals. *Psychological Bulletin*, *124*(3), 283-307. https://doi.org/10.1037/0033-2909.124.3.283

Social cognition in adults with mild intellectual disability, dual diagnoses, and typical development

Bojana R. Mastilo

University of East Sarajevo, Faculty of Medicine Foca, Foca, Bosnia and Herzegovina

Introduction. Social cognition is a multidimensional construct that encompasses higher-order cognitive processes used to process and interpret social information and successfully communicate with others. These processes include cognitive theory of mind, affective theory of mind, understanding of social norms, moral judgment and empathy. *Objective.* The aim of our study was to determine the differences in social cognition in adults with mild intellectual disability, dual diagnoses, and typical development paired chronologically, and to determine the relationship between age, gender and socio-cognitive abilities in all three groups. *Methods*. Our study included 122 participants, of whom 32 were with intellectual disability, 30 had dual diagnoses, and 60 were typically developing adults. The Edinburgh Social Cognition Test - ESCoT was used to assess social cognition, while the Mini Psychiatric Assessment Scale for Adults with Developmental Disorders, MINI PAS - ADD was used to confirm the presence of psychiatric symptoms in adults with developmental disabilities. *Results.* The obtained results showed that adults with mild intellectual disability had better performance in social cognition than adults with dual diagnoses, but worse than typically developing adults. Also, the research showed that in the subsample of typically developing participants, these abilities decreased with age, the abilities of affective theory of mind decreased with age in persons with intellectual disabilities, while no correlation was found between younger and older respondents in persons with dual diagnoses. Our research has not confirmed the relationship between gender and social cognition. *Conclusion.* By determining the development of social cognition in adults with intellectual disability and dual diagnoses, we gain insight into their adaptive functioning in everyday social interactions.

Keywords: social cognition, theory of mind, intellectual disability, dual diagnoses

PRIMLJENO: 03.08.2022.
REVIDIRANO: 15.11.2022.
PRIHVAĆENO: 20.12.2022.