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Contents

INCLUSION AND d/DEAF AND HARD OF HEARING STUDENTS:
A QUALITATIVE META-ANALYSIS

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ABSTRACT

This study investigated the prominent perspectives on the effects of inclusion on d/Deaf and hard of hearing (d/Dhh) students. A systematic search of databases and journals was conducted. The researchers identified 23 studies that met the inclusion criteria, and other articles were analyzed to support the interpretations and provide suggestions for the improvement of inclusion. Inclusion of d/Dhh students in general education classrooms is controversial because of the students' unique language and communication needs. In addition, there are contradictory findings regarding the effects of inclusion on academic achievement and social development. These inconsistent findings were primarily due to the use of different research methodologies, different measurements and tests, and the diverse experiences of the home and school environments. Based on the findings of this study, recommendations for further research are suggested.
Keywords: Inclusion, Academic Achievement, Perspective, Social Interaction

INCLUSION AND D/DEAF AND HARD OF HEARING STUDENTS:
A QUALITATIVE META-ANALYSIS

The number of d/Deaf and hard of hearing (d/Dhh) students who are educated in general education classrooms has increased in several countries (Eriks-Brophy & Whittingham, 2013). In the United States (USA), for example, most d/Dhh students are educated in general education classrooms with typical (hearing) peers (e.g., Johnson, 2013; Salend, 2001). Information from the U.S. Department of Education (2013) indicated that about 19.4% of students spend 40% to 70% of their day in general education classrooms whereas 61.8% spend 80% or more of their day in general education classrooms. In addition, about 13.8% of students spend less than 40% of the day in general education classrooms, and about 2.9% are in separate schools for students with disabilities. About 2.1% are educated in separate residential facilities or regular private schools, such as homebound/hospital placements, and correctional facilities.

Similarly, the majority of d/Dhh students in England receive their education in general education classrooms with typical peers (Power, 2002).

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According to Eatough (2000), in 1998, most students with moderate to profound hearing loss were educated in general public schools, and only 20% were educated in special schools for d/Dhh students. At present, about 85% of d/Dhh students are educated in mainstream schools in England whereas 3% receive their education in special schools for d/Dhh children and 12% in special schools not specifically for d/Dhh children (Consortium for Research in Deaf Education, 2017).

It has been asserted that the number of students in general education classrooms will continue to grow in light of legislation that supports inclusion in several countries, including developing countries. In addition, researchers predict an increase in the inclusion of d/Dhh students due to the effectiveness of early identification, early amplification, and early intervention programs (Antia, Jones, Reed, & Kreimeyer, 2009; Standley, 2005; also, see discussion in Wang & Engler, 2010). The expected increase of students who are educated in general education classrooms is attributed to factors such as financial pressures, parental expectations, and technological developments (Angelides & Aravi, 2007; Antia et al., 2009).

Given the increase in the number of d/Dhh students in general education classrooms, several questions that address a number of important aspects of the inclusion of d/Dhh students have been raised (e.g., Antia, Jones, Luckner, Kreimeyer, & Reed, 2011). For example: Does inclusion positively affect the academic and social development of d/Dhh students? Can these students access the general education curriculum? Are there barriers that inhibit the inclusion of students? Are general education classroom teachers qualified to teach d/Dhh students in their classrooms? If so, are they willing to collaborate with special education teachers of d/Dhh students? In general, the answers to these questions may be influenced by quality indicators associated with research such as demography, the nature of the researchable questions, validity of instruments, research designs, and so on (e.g., see discussions of research and deafness in Easterbrooks, 2017; Luckner, 2017; Mitchell, 2017; Paul & Wang, 2017). Other factors include the nature of the constructs being measured (e.g., language and literacy development) and the sociocultural contexts of schools (e.g., teacher-student interactions; teacher competency).

In this article, we synthesize a selection of primary (i.e., original, empirical) and secondary (i.e., research reviews) investigations to address the following three questions:

1. What are the prominent perspectives on the effects of inclusion for d/Dhh students?
2. Are the research findings on the effects of inclusion consistent or inconsistent?
3. What are the salient suggestions to enhance the inclusion of d/Dhh students?

Based on the analysis of findings involving the above three questions, a few recommendations for further research are suggested.

This is a qualitative meta-analysis of studies, influenced by interpretations of existing theories and models (Collins & Fauser, 2005; also see, Luckner, 2017). Qualitative meta-analysis is a rigorous narrative analysis of primary and secondary research findings and can be undertaken by a multi-disciplinary team (Greenhalgh, Potts, Wong, & Bark, Swinglehurst, 2009).The various approaches to this type of research have engendered a variety of labels such as qualitative meta-analysis, meta-synthesis, meta-data analysis, meta-ethnography, meta-study, meta-summary, meta-method, metatheory, and grounded formal theory (Timulak, 2007). For the present study, this analysis should extend the knowledge base on inclusion for d/Dhh children and adolescents. To the best of our knowledge, this is a seminal study utilizing this type of analysis on the above research questions.

METHOD

Search Procedures

We reviewed and analyzed the literature in three stages. First, several electronic search engines were used, including Education Full Text (Wilson), ERIC, EBSCOhost, ProQuest, and PsycInfo, to obtain relevant articles. In addition, selected individual journals with published research on d/Dhh children such as *American Annals of the Deaf, Deafness & Education International*, the *Journal of Deaf Studies & Deaf Education*, and the *Volta Review* were perused. Specific key phrases and words included *inclusion of deaf and hard of hearing students, academic achievement of deaf students in general education classroom, full inclusion, social inclusion, interaction of deaf students in general education classroom, access to the general education curriculum*, and the *challenges of including deaf and hard of hearing students*. Second, after selecting studies from the above search engines, the reference list of each study was reviewed to locate additional sources. Third, all selected articles were reviewed, and articles that did not meet the inclusion criteria were excluded.

The criteria for including studies in this meta-analysis were as follows:

1. Because there are few studies that have examined the inclusion of d/Dhh students, studies conducted between 1985 and 2017, inclusive, were selected. The debate and research on inclusion emerged during the late 1980s (e.g., Paul & Ward, 1996; Winzer, 2009).
2. Due to the dearth of primary empirical studies, two broad types of research were considered; primary empirical investigations and secondary research reviews.
3. Participants should be, at least, students who were d/Deaf and hard of hearing or teachers of d/Deaf and hard of hearing students.
4. Articles were reviewed if the issues concern the inclusion of students who were d/Deaf and hard of hearing in general-education classrooms.

ANALYSIS

The systematic search of databases and journals yielded 23 studies that met the inclusion criteria. Each selected article was analyzed with respect to providing information pertaining to one or more of the research questions listed above. Below are summaries of the research articles, presented in a Table format.

Table 1. Summary of the Reviewed Studies

Author & Date	Country	Research purpose	Methods	Participants	Findings
Afzali-Nomani (1995)	USA (Kansas)	To investigate the effects of full inclusion on the academic achievement and social development of D/HH and hearing children.	The researcher used a non-experimental research design. Specifically, a multiple regression analysis was performed to optimally combine scores on the five educational conditions scales to enhance prediction of each of the six criteria.	55 teachers of d/Dhh students and general education teachers who were employed in public school districts. These teachers should have experiences teaching in full inclusion programs.	The teachers were asked to rate the effects of inclusion on d/Dhh students based on three criteria: academic achievement, social adjustment, and self-confidence/esteem. Findings show that inclusion has a positive impact on the academic achievement of students with hearing loss. However, the positive effects of inclusion on d/Dhh students increase when students receive social encouragement, when teachers support the program, and when there is a full range of placement options.
Angelides and Aravi (2006)	Cyprus	To investigate the experiences of d/Dhh students in inclusive education schools and in special schools.	The study followed an interpretive model of research based on the three basic premises of symbolic interactionism:1) human beings act toward things on the basis of the meanings the things have for them, 2) the meanings of such things derive from, or arise out of, the social interaction that one has with one's fellows, 3) these meanings are handled in, and modified through, an interpretative process used by the person.	20 individuals with hearing loss that ranged from mild to profound in inclusive schools and in special schools.	The researchers investigated the experiences of 20 d/Dhh students in inclusive schools and in special schools. Deaf and hard of hearing participants reported that the inclusive schools provided more opportunities for learning than special schools. Also, the researchers asserted that including d/Dhh students in inclusive classrooms obliged teachers to differentiate their instruction to meet students' needs. Further, the inclusion of d/Dhh students led teachers to develop collaborations between themselves in order to facilitate the learning of not only d/Dhh students, but also of all children. Finally, the inclusion of d/Dhh students led teachers to the development of more inclusive practices, which influence all students in the school.

Continuation of table 1.

Author & Date	Country	Research purpose	Methods	Participants	Findings
Antia, Jones, Luckner, Kreimeyer, and Reed (2011)	USA (Arizona and Colorado)	To examine the social skills and problem behaviors of d/Dhh students who attended general education classrooms.	The researchers used a non-experimental research design. Specifically, the researcher used descriptive analysis to describe the social interaction.	191 students with mild to profound hearing loss who attended general education classrooms for 2 or more hours per day.	The results showed that the average change over 5 years in social skills and problem behaviors of d/Dhh students was not significant. The most consistent predictors of social outcomes for d/Dhh students were the students' classroom communication and participation in extracurricular activities.
Antia, Jones, Reed, and Kreimeyer (2009)	USA (Arizona and Colorado)	To examine the academic achievement of d/Dhh students who attend general education classrooms.	Non-experimental research design using a teacher rating scale-the Academic Competence Scale of the Social Skills Rating System. Also, the researchers used both normative and classroom academic data to determine the academic progress of d/Dhh students.	197 students with mild to profound hearing loss who attended general education classrooms for 2 or more hours per day.	The scores of d/Dhh students on standardized achievement tests indicated that, those students' academic achievement was in the average or above-average range in math and reading.
Antia, Kreimeyer, and Eldredge (1994)	ASU (Arizona, California, Oregon, Washington State, Pennsylvania, and the District of Columbia)	To examine the effects of two social skills intervention conducted by Antia and Kreimeyer (1987, 1988) on the peer social interactions.	The researchers adapted the social skills intervention for d/hh children in segregated preschool programs for use in inclusive situations by providing opportunities for children without hearing loss to learn sign language during the intervention sessions, if necessary.	105 young children with and without hearing loss from 13 different preschools, kindergarten, and 1st-grade programs.	The interactions between students with hearing loss and typical hearing students were increased after the intervention was implemented. The results showed that using long-term interventions within small, stable groups of children with and without hearing loss is effective.
Batten, Oakes, and Alexander (2014)	N/A	To investigate whether teachers had the attitudes, knowledge, and teaching skills proposed to support the effective inclusion of students in regular classrooms.	A systematic literature review using a wide range of electronic databases.	The researchers reviewed and analyzed 14 qualitative, quantitative, or mixeddesign studies with participants aged 4−19 years old with hearing loss. Specifically, seven of these studies included d/Dhh children aged from 4 to 12, whereas three studies included d/Dhh children aged from 12 to 19. Also, eight studies included participants with cochlear implants, with one study including bilateral cochlear implants.	The researchers conducted a systematic literature review to explore factors associated with social interaction between d/Dhh children and hearing peers. The study found that child's age, communicational competency, and level of mainstreaming was positively associated with peer interactions.

Continuation of table 1.

Author & Date	Country	Research purpose	Methods	Participants	Findings
Eriks-Brophy & Whittingham, (2013)	Ottawa, Canada	To examine teachers' attitudes toward the inclusion of d/Deaf and hard of hearing students.	Non-experimental research design, using survey research.	The participants included 63 teachers in general education classrooms.	The researchers found that teaching experience and having family members with a disability most affected the attitudes of these teachers. The participants also indicated that their teacher education programs had insufficiently prepared them to teach these students effectively.
Holt (1994)	USA	To investigate reading comprehension and mathematics computation achievement of d/Dhh students in a variety of school settings.	Data were collected by Gallaudet University Center for Assessment and Demographic Studies during its 1990 standardization of the 8th Edition Stanford Achievement Test. The researchers used descriptive and inferential methods to analyze the relationships among achievement scores.	A sample of d/Dhh students, ages 6 through 21, selected for a project that produced special norms for the Stanford Achievement Test, 8th Edition (SAT8).	The results indicated that the scores on reading comprehension and mathematic of d/Dhh students who are educated with hearing students in general education classroom were higher than in segregated settings. However, it was not known whether the higher achievement is due to inclusion or whether students were selected for inclusion due to their higher achievement levels.
Hung and Paul (2006)	USA (Ohio)	To examine whether the inclusion of d/Dhh students affects attitudes of typical hearing students. Specifically, it explored the effects of factors such as contact experience, closeness, class norms, and demographical information (class setting, grade level, and gender) on typical hearing students' attitudes toward inclusion of d/Dhh students in general education classrooms.	This study utilized a correlational research design, entailing a survey approach with direct group administration to collect data.	Students with and without hearing loss in general education classroom in middle and high schools.	The findings revealed that including d/Dhh students in general education classrooms increases contact between d/Dhh students and typical hearing students. This effective contact between students is a significant reason that typical hearing students have positive attitudes toward students with hearing loss.

Continuation of table 1.

Author & Date	Country	Research purpose	Methods	Participants	Findings
Johnson and Johnson (2012)	USA	To compare co-operative and individualistic learning experiences between hearing students and students with hearing loss and their effects on interactions and relationships between the students.	The researcher used an experimental design to compare the two groups of students.	10 d/Dhh students in 3rd-grade and 20 hearing students were the participants.	The results showed that students involved in cooperative learning experiences performed higher on measures of interactions and interpersonal attractions between typical hearing and d/Dhh students than did students involved in individualistic learning experiences.
Kluwin (1993)	USA	To examine the effects of inclusion on the achievement and grade point average (GPA) of d/Dhh students.	The research used a comparison design, and data was collected via the Annual Survey Data and Annual Survey of Hearing Impaired Children and Youth.	451 students, with hearing loss, range from mild to profound, from 15 public school programs.	The results showed that inclusive education for d/Dhh students has a positive effect on their academic achievement. Specifically, d/Dhh students who attended general education classrooms have higher scores on the achievement tests. The researcher concluded that including students with hearing loss in general education classrooms is important to engage these students in a high-quality academic atmosphere.
Kluwin and Moores (1989)	USA	To examine the mathematics achievement of d/Dhh adolescents in mainstream and self-contained classrooms.	Descriptive research design, using a survey to collect data.	215 d/Dhh students with an average age of 16.7 years and 63 teachers.	The results indicated that d/Dhh students' background factors have a significant impact on their mathematics achievement. Also, it was found that interpreters have no specific effect on mathematics achievement of d/Dhh students in mainstream classrooms. Finally, the results showed that the quality of instruction is the prime determinant of achievement, regardless of placement.
Kluwin and Moores (1985)	USA	To examine the relative effects of placement in an integrated class on the mathematics achievement of d/Dhh adolescents.	Comparison research design with a questionnaire to collect data was used.	36 d/Dhh students in mainstream mathematics classes were compared with 44 d/Dhh students in self-contained classrooms. All students in mainstream mathematics and self-contained classes were matched on mathematics ability, reading ability, degree of hearing loss, and social adjustment.	The results showed that d/Dhh students in inclusive classrooms performed significantly better than the students in the self-contained classes. Further, the results identified four factors, including higher expectations, exposure to greater quantities of demanding material, availability of individual support, and training in academic content for regular mathematics teachers, for the differences in mathematics achievement between students in inclusive classroom and those in self-contained classes.

Continuation of table 1.

Author & Date	Country	Research purpose	Methods	Participants	Findings
Leigh (1999)	USA	To examine the effects of inclusion on the personal development of d/Dhh students.	Descriptive research design was used. Data were collected, using a 12- item open-ended questionnaire.	34 d/Dhh adults, who typically depend on speech as the preferred communication method, at the Oral Hearing-Impaired Section (OHIS) of the Alexander Graham Bell Association.	Participants emphasized that their educational experiences contributed to the change in their perception about themselves. Further, half of the participants indicated they changed their self-labels because their perceptions of the personal definition of hearing loss had changed.
Marschark, Shaver, Nagle, & Newman (2015)	USA	To investigate the effects of factors, including the characteristics of d/Dhh students, the characteristics of their family environments, and their experiences, on the academic achievement of d/Dhh students in secondary schools.	The researchers analyzed data from the National Longitudinal Transition Study–2 (NLTS2), funded by the U.S. Department of Education in 2000. Specifically, they used cross-wave, cross-instrument weight appropriate for multiple waves of NLTS2 data and multiple instruments to accommodate for design effects and the complex nature of the data set.	500 d/Dhh who received their education in regular secondary school or state-sponsored special schools designed for d/Dhh students.	The findings indicated a significant relationship between the independent variables, including having an additional diagnosis of a learning disability, having a mild hearing loss, being African American or Hispanic, and the dependent variable-academic achievement of d/Dhh students.
McCain and Antia (2005)	USA	To examine the communication participation, academic achievement, and social behavior of five d/Dhh students, five d/Dhh students with additional disabilities, and 18 nondisabled, typical hearing peers in a co-enrolled, Grade 3-4-5 combination classroom.	The researchers used a mixed-model Analysis of Variance (ANOVA) with the four CPQ scores as the repeated measure and the three groups as the between-subjects measure to analyze data.	5 d/Dhh students, 5 d/Dhh students with additional disabilities, and 18 non-disabled, hearing peers.	The findings indicated that d/Dhh students were not significantly different from their typical hearing peers in communication participation and social behavior. The researchers found differences in academic achievement, but d/Dhh students made steady academic progress over 3 years. Also, the findings showed that d/Dhh students with additional disabilities were significantly different from their typical hearing peers, but not from their d/Dhh peers in all areas. Finally, the researchers concluded that co-enrollment is a possible beneficial model of inclusion for d/Dhh students.
Musselman & Mootilal (1997)	Canada	To examine the social adjustment of d/Dhh adolescents enrolled in segregated, partially integrated, and mainstream settings.	Comparison research design with a questionnaire to collect data was used.	39 d/Dhh adolescents enrolled in segregated settings, 15 deaf adolescents in partially integrated settings, 17 deaf adolescents in mainstream settings, and 88 typical hearing students.	d/Dhh students in segregated classrooms exhibited the lowest levels of adjustment overall. Also, partially integrated students exhibited better adjustment than mainstream students with deaf peers; mainstream students reported better adjustment than did partially integrated students with typical hearing peers, exhibiting the same levels of adjustment as those of typical hearing peers.

Continuation of table 1.

Author & Date	Country	Research purpose	Methods	Participants	Findings
Powers (2003)	England	To investigate student and family factors that affect academic achievements of d/Dhh children.	The researcher used a survey to collect data. For data analysis, the researcher used inferential and descriptive methods.	82 d/Dhh students who were educated in mainstream schools.	The findings showed the complexity of interpreting statistical results, especially on the effects of degree of hearing loss.
Reed, Antia, and Kreimeyer (2008)	USA (Arizona and Colorado)	To examine the variables that affect the academic success of d/Dhh students in general education classrooms.	The researchers used a qualitative research design, and data were collected as part of a large longitudinal study of academic and social progress of d/Dhh students in general education classrooms.	25 students with mild to profound hearing loss who attended general education classrooms.	The results indicated that the academic achievement of d/Dhh students is influenced by factors such as student self-advocacy and motivation, high family and school expectations, families' ability to help with homework, and good communication between professionals.
Richardson, Marschark, Sarchet, and Sapere (2010)	USA	To investigate the experiences of d/Dhh students in general education classrooms versus in separate education classrooms.	The researchers used two surveys to collect data. Data were analyzed by using chi square tests and logistic regression analysis.	217 d/Dhh students who studied at Rochester Institute of Technology (RIT).	Findings indicated that students in separate classrooms prefer to communicate with typical hearing students using sign, speech and sign, or notes. Also, those students reported that they prefer to use sign or speech and sign to communicate with teachers in mainstream classes. On the other side, students in inclusive education classrooms prefer to use an interpreter or speech to communicate with typical hearing students as well as their teachers.
Stinson and Liu (1999)	USA	To identify the key issues concerning participation of d/Dhh students in general education classrooms.	This study used a qualitative approach to collect data and report the results.	40 teachers of d/Dhh students and educational interpreters.	The researchers reported that there are many factors that influence d/Dhh student's participation in general education classrooms, including their degree of hearing loss, teachers' attitudes, and teachers' abilities to engage students in their lessons.
Wauters and Knoors (2008)	Netherlands	To examine social integration of d/Dhh children in inclusive settings.	A structural equation modeling was used. The researchers used two instruments to measure peer relations in the various classrooms: peer ratings and peer nominations.	18 d/Dhh students (56% female, 44% male) and 344 hearing students (52% female, 48% male) in Grade 1–5 participated in the study.	The findings showed that d/Dhh children were similar in their peer acceptance and friendship relations, but there were differences in social competence. Specifically, d/Dhh children scored lower than typical hearing children on prosocial behavior and higher on socially withdrawn behavior. In addition, the structural equation modeling showed peer acceptance, social competence, and friendship relations to be stable over time, and the structure of interrelations between variables on two measurements were found to be the same for d/Dhh and typical hearing participants.

Continuation of table 1.

Author & Date	Country	Research purpose	Methods	Participants	Findings
Xie, Potmešil, and Peters (2014)	N/A	To describe how d/Dhh children interact with hearing peers in inclusive education classrooms.	A systematic literature review using a wide range of electronic databases.	21 studies were reviewed and analyzed.	The study found that d/Dhh students faced challenges in communicating, initiating/entering, and maintaining interactions with typical hearing peers in inclusive education classrooms. Also, these students needed effective interventions to assist them to continue in the general education classrooms.

RESULTS

The results of the meta-analysis are reported for each research question.

1) What are the prominent perspectives on the effects of inclusion for d/Dhh students?

The literature review reveals much controversy on the inclusive education of d/Dhh students. Several researchers (Angelides & Aravi, 2006; Innes, 1994; Powers, 2003) indicated that there is ongoing debate over whether d/Dhh students should be considered differently from the situation of other students with disabilities. In other words, the unique language and communication needs of d/Dhh students may pose challenges that are different from those of students with other types of disabilities (e.g., Xie, Potmesil, & Peters, 2014). d/Dhh students often experience difficulties in understanding instructions and other information from teachers. Particularly, some students with hearing loss may not understand up to 25% of the verbal classroom instructions and interactions.

Hung (2005; also see, Hung & Paul, 2006) also cited researchers who argued that the best educational setting for d/Dhh students is one in which a signed language is used solely or in conjunction with a spoken language (e.g., signed system). These researchers believe that a number of d/Dhh students experience difficulty in general education classrooms because these students prefer an educational setting that represents the d/Deaf community with an emphasis on Deaf culture and signed language. Thus, including these d/Dhh children in general education classrooms may negatively influence their peer relationships and their academic achievement.

On the other hand, a number of researchers believe that there is no essential need for a special education classroom (and curriculum) for d/Dhh students because they can succeed academically and socially in general education classrooms with typical (hearing) peers (Afzali-Nomani, 1995; Antia, Jones, Reed, & Kreimeyer, 2009; Johnson & Johnson, 2012; Kluwin, 1993). This argument is supported by the basic tenet of the qualitative similarity hypothesis (QSH), which asserts that the learning trajectory of d/Dhh students is developmental similar to that of typical (hearing) students (Paul, Wang, & Williams, 2013). The QSH asserts that the knowledge acquisition process of d/Dhh students is qualitatively similar to that of typical learners with the only exception being that the knowledge acquisition rate of some d/Dhh students might be delayed or slower. Accordingly, the slower knowledge acquisition rate of d/Dhh students, particularly language and literacy development, can be addressed by using instructional and curriculum accommodations and modifications such as Visual Phonics, Cued Speech, and other strategies that have a visual component.

In the reviewed articles, we found a range of perspectives regarding the effects of inclusion on the academic achievement of d/Dhh students. In general, the academic achievement of d/Dhh students was measured through the use of standardized test scores or was based on teachers' perceptions (Antia, Jones, Reed, & Kreimeyer, 2009; McCain & Antia, 2005). Some researchers reported that the academic achievement of d/Dhh students was lower than that of typical hearing students. For example, Holt (1994) reported that d/Dhh students in general education schools performed lower than typical hearing students in reading comprehension and mathematics problem solving.

From another perspective, a number of studies reported that d/Dhh students who are educated in general education classrooms have a higher academic achievement than those who receive their education in special education (i.e., self-contained) classrooms (Afzali-Nomani, 1995; Kluwin, 1993).

Other researchers have also reported a positive effect of inclusion on the academic achievement of d/Dhh students (Afzali-Nomani, 1995; Angelides & Aravi, 2006; Antia, Jones, Reed, & Kreimeyer, 2009; Holt, 1994; Kluwin, 1993; McCain & Antia, 2005). Among the latter group of researchers, there is a consensus that inclusive education provides d/Dhh students with specific high academic goals, entails an effective use of assessments, and presents a rich curriculum, which assists in developing the necessary abilities and skills for academic achievement.

Antia et al. (2009) investigated the academic achievement of 197 students with mild to profound hearing loss who attended a general education classroom for two or more hours per day. The results indicated that the majority of these students scored in the average or above-average range on standardized mathematics, reading, language, and writing achievement tests. Anita et al. also indicated that teachers rated 69–81% of the d/Dhh students in the general education classrooms as average or above average in academic achievement.

Angelides and Aravi (2006) examined the experiences of 20 d/Dhh students in inclusive schools and in special schools (i.e., schools for children with specific disabilities). The researchers found that inclusive schools provided more opportunities for learning than special schools did, and that students in inclusive schools received richer and more thorough instruction than did the students in special schools. Furthermore, the researchers asserted that including d/Dhh students in inclusive classrooms obliged teachers to differentiate their instruction to meet students' needs as well as to develop collaborations between themselves to facilitate the learning of not only d/Dhh students, but also of all the students. The researchers concluded that the inclusion of d/Dhh students led teachers to the development of more effective inclusive practices, which influence all students in the school.

Another issue that has diverse perspectives is the social integration of d/Dhh students in general education classrooms (Antia et al., 2011; Hung, 2005; Hung & Paul, 2006; Musselman & Mootilal, 1997; Wauters & Knoors, 2008). Although the literature on social interactions of d/Dhh students is limited and results are inconsistent (Xie, Potmesil, & Peters, 2014), some researchers indicated that d/Dhh students in general education classrooms tend to face social barriers in terms of making friends and participating in social activities (Antia, Kreimeyer & Eldredge, 1994; Antia & Stinson, 1999; Batten, Oakes & Alexander, 2014; Stinson & Liu, 1999; Xie, Potmesil, & Peters, 2014).

These researchers attributed the social problems of d/Dhh students in general education classrooms to difficulties with their language and communication abilities. Specifically, the researchers asserted that these social problems might vary based on students' degree of hearing loss. For example, students with severe to profound hearing loss may experience more isolation and loneliness in general education classrooms than students who have less severe levels of hearing loss (i.e., hard of hearing). These researchers also asserted that the negative attitudes of teachers and peers in general education classrooms toward d/Dhh students can be a significant reason for social interaction challenges and can limit classroom participation of d/Dhh students. It is reiterated that d/Dhh students' proficiency level of spoken language and communication skills is the most common factor leading to the harboring of negative attitudes among teachers and typical hearing peers (Hung & Paul, 2006).

Antia and Stinson (1999) admitted also that there are social challenges that d/Dhh students face in general education classrooms; however, these researchers asserted that inclusion eliminates the deleterious effects of isolation and the stigma attached to d/Dhh students. Other researchers (Antia, Kreimeyer, & Eldredge, 1994; Batten, Oakes, & Alexander, 2014; McCain & Antia, 2005; Wauters & Knoors, 2008) also emphasized that not all d/Dhh students experience isolation and rejection in inclusive classrooms. They believe that inclusion has a positive impact on d/Dhh students by increasing their access to the typical linguistic and behavioral models of their typical hearing peers. Furthermore, Leigh (1999) argued that inclusion plays an important role in increasing d/Dhh students' self-confidence and in changing their negative self-perceptions. In essence, the above investigators maintained that it is important for teachers and school staff to create effective contexts where d/Dhh students can frequently interact with typical hearing peers. In other words, the role of teachers in inclusive education classrooms is not only to improve d/Dhh students' academic outcomes, but also to increase their social interactions via classroom social activities.

2) Are the research findings on the effects of inclusion of d/Dhh students consistent or inconsistent?
Our review of the research on the inclusion of d/Dhh students in general education classrooms revealed few inconsistent findings that may be the result of the use of different research methodologies or different measurements and tests (Antia, Jones, Reed, & Kreimeye, 2009).

Another major reason for the inconsistent findings is due to the d/Dhh students' diverse experiences and to differences in the home and school environments. A few researchers (Kluwin & Moores, 1989; Marschark, Shaver, Nagle, & Newman, 2015; Powers, 2003; Reed, Antia, & Kreimeyer, 2008; Richardson, Marschark, Sarchet, & Sapere, 2010) emphasized that there is tremendous variation in d/Dhh children with respect to, for example, degree of hearing loss, factors associated with their home environment (e.g., parental involvement; language and literacy experiences), school context (e.g., teacher competency; teacher and students' attitudes), and their language and communication skills. d/Deaf and hard of hearing children come from different racial, ethnic, and economic backgrounds, and there are other significant factors that can impact findings such as early identification of hearing loss, early intervention services, consistent use of amplification, and family-oriented infant programming (Antia, Jones, Reed, & Kreimeye, 2009; Powers, 2003; Wang & Engler, 2011). Diversity among d/Dhh children also affects their education and achievement in general education classrooms as well as their communication and interaction with teachers and typical hearing peers (Marschark, Shaver, Nagle, & Newman, 2015; Xie, Potmešil, & Peters, 2014). Thus, conducting research on the inclusion of d/Dhh students requires an understanding of students' individual characteristics, demography, and home and cultural backgrounds to be able to report reliable and valid findings. For example, some studies did not distinguish between students with severe and profound hearing loss and those with less severe hearing (Afzali-Nomani, 1995; Marschark, Shaver, Nagle, & Newman, 2015; Powers, 2003). This difference in degree of hearing loss may have a significant effect on each student's academic achievement and social interaction in general education classrooms. This difference also affects the generalization of findings and the proffering of valid implications.

In addition to factors discussed above, our review revealed that a school's context raises significant factors that contribute to the inconsistent results about the inclusion of d/Dhh students (Antia, Jones, Reed, & Kreimeye, 2009). For example, d/Dhh students who received their education from highly qualified teachers and in motivated learning environments often exhibited better academic achievement and social interaction than d/Dhh students in other educational settings (Marschark, Shaver, Nagle, & Newman,

2015). Students who were educated in schools that provided them with a variety of learning activities for acquiring and improving language skills and developing their learning readiness from kindergarten to third grade and further also showed better academic achievement and social interaction than d/Dhh students in other educational settings (Marschark, Shaver, Nagle, & Newman, 2015). In essence, researchers must consider the influences that a school's context has on d/Dhh students who are participants in their studies. More specifically, researchers must gather sufficient information about each school's learning environment in terms of possible academic and emotional support such as tutoring, effective instruction, and effective social interactions.

3) What are the suggestions to enhance the inclusion of d/Dhh students?

Our review indicated that a number of d/Dhh students can succeed academically and socially in general education classrooms with typical hearing peers (Afzali-Nomani, 1995; Angelides & Aravi, 2006; Holt, 1994; Kluwin, 1993; Marschark, Shaver, Nagle, & Newman, 2015; Powers, 2003). d/Deaf and hard of hearing students can gain access to general education curriculum when they receive effective and appropriate educational supports and services from staff in schools, in particular, teachers (Antia, Jones, Reed, & Kreimeyer, 2009; Powers, 2003). There is no need to develop special curricula for students; the focus should be on increasing the rate of students' knowledge through differentiation of instruction with the general education curriculum. As mentioned previously, to increase the English literacy acquisition rate for a number of d/Dhh students, researchers have suggested using techniques such as Visual Phonics and Cued Speech, to assist with accessing phonology and other phonological processes, an important component of early literacy development (Paul et al., 2013; Wang, Trezek, Luckner, & Paul, 2008).

Other researchers pointed out the importance of providing support services to d/Dhh students in general education classrooms to assist them in gaining access to the general education curriculum (Afzali-Nomani, 1995; Antia et al., 2011). These researchers indicated that educational interpreting (sign and oral interpreters) is an important support service for d/Dhh students in general education classrooms to facilitate communication with their teachers and classroom peers. Berndsen and Luckner (2012) emphasized the importance of the use of technology.

In other words, the inclusive classroom teachers must have sufficient training in how to use educational technology (e.g., smartboards, Internet, etc.). In addition, these researchers argued that general education classrooms should be equipped with adequate educational technologies and materials to facilitate the roles of teachers in these settings.

Our review revealed that the successful inclusion of d/Dhh students in general education classrooms relates to a number of significant factors; however-as mentioned previously-facilitating and improving the language and communication skills of d/Dhh students is also critical for successful inclusion. For example, Hung (2005; also see Antia, Jones, Luckner, Kreimeyer, & Reed, 2011; Batten, Oakes, & Alexander, 2014; Hung & Paul, 2006; Johnson & Johnson, 2012) emphasized that facilitating the communication and contact between d/Dhh students and typical hearing peers is a significant reason that typical students develop positive attitudes toward d/Dhh students. Similarly, Batten, Oakes, and Alexander (2014) indicated that inclusion of d/Dhh students cannot be successfully achieved without considering and addressing d/Dhh children's experiences, including their language skills. In essence, improving the language and literacy skills of d/Dhh students is not only important for improving their communication with teachers and peers, but also, it provides d/Dhh students with the ability to access the general education curriculum and to participate effectively in assessment programs. The reviewed articles (Antia, Jones, Luckner, Kreimeyer, & Reed, 2011; Antia, Kreimeyer, & Eldredge, 1994; Batten, Oakes, & Alexander, 2014; Hung & Paul, 2006; Musselman & Mootilal, 1997) suggested other important factors-several mentioned previously-that are necessary for d/Dhh students to succeed in general education classrooms.These factors include family involvement, self-determination, extracurricular activities, friendships, social skills, self-advocacy skills, collaboration with early identification and early intervention service providers, high expectations, and preteach/teach/postteach content and vocabulary being learned in the general education classrooms. Several articles that were reviewed (Afzali-Nomani, 1995; Antia, Jones, Reed, & Kreimeyer, 2009; Cochran-Smith, 2003; Luckner & Muir, 2002; Marschark, Shaver, Nagle, & Newman, 2015) agreed that the inclusive education of d/Dhh students cannot succeed unless teachers fulfill their role by effectively participating and collaborating in the inclusion process while providing high-quality instruction. The researchers emphasized that high-quality instruction is necessary for improving student learning in terms of understanding how, what, and why they learn. For example, Power (2002) indicated teachers must understand the practice of inclusion so that they utilize effective instructional strategies in the general education classroom. This implies that it is not sufficient for inclusive classroom teachers to have knowledge-based content alone to teach students successfully, but they must also understand inclusive practice and methods to communicate and interact with students.

Research on the proficiency and attitudes of teachers in general and special education also revealed critical findings for effective inclusive practices, especially for d/Dhh children and adolescents. For example, some researchers (Afzali-Nomani, 1995; Eriks-Brophy, & Whittingham, 2013) indicated that special education teachers, including teachers of d/Dhh students had sufficient knowledge about the educational practice of inclusion and of the characteristics of students, but they lacked the necessary knowledge and skills to teach content areas such as mathematics, science, and reading. Special education teachers demonstrated better understanding of inclusive education practice and were better at motivating students with disabilities than were general education teachers. These researchers also pointed out that special education teachers exhibited more confidence than did general education teachers in working and collaborating with the parents of children with disabilities. On the other hand, most general education teachers had a good grasp of knowledge-based-content, but they lacked sufficient knowledge about the needs of students with disabilities and of inclusive education practices such as collaborative team-teaching skills and working as a part of an Individual Education plan (IEP) team.

A number of articles, which were not analyzed in this study, also found that general education teachers did not have the skills needed to appropriately and effectively adapt instruction to meet the needs of students with disabilities in general education classrooms. For example, Scruggs and Mastropieri (1996) reported that one third, at most, of general education teachers believed that they had sufficient training, skills, and resources necessary to teach in an inclusive classroom. According to the teachers in this study, their lack of knowledge about the practice of inclusion and of the characteristics of students with disabilities had a pervasive effect on their perceptions and degree of acceptance about including students with disabilities in their classrooms.

This study indicated that general education teachers need more training in the methodology of teaching students with disabilities, implementing collaboration, and using different sources in developing instruction materials. The researchers also argued that general education teachers need more training than did special education teachers in areas such as assessing academic progress, adapting curriculum, developing IEPs, and using assistive technology.

RECOMMENDATIONS FOR FUTURE RESEARCH

Given the range of factors that needs to be considered, doing inclusive research on children and adolescents who are d/Dhh and on other populations is challenging and controversial (e.g., Allan & Slee, 2008). This assertion can even be gleaned from current textbooks for preparing teachers to work in inclusive classrooms (e.g., Bryant, Bryant, & Smith, 2017). In one sense, research on inclusive education is similar to conducting research on the effectiveness of teacher-education programs for which there is a number of impactful factors. Variables of interest for inclusive education research entail, at least, those associated with the environment (e.g., school, classroom, home), the teacher (e.g., proficiency, attitudes, teacher-student interaction, co-teaching), curriculum (e.g., accessibility), and the student (e.g., demography; factors associated with language, cognition, and the affective domain). Understanding the effects of inclusion on a macro level using group/quantitative research designs cannot be accomplished with one or two investigations. Conducting research on the macro level, including group intervention research, is even more challenging for low-incidence populations such as children and adolescents who are d/Deaf and hard of hearing. If macro-level research is desirable, especially for comparison purposes (e.g., inclusive versus segregated environments), then we recommend that, as much as possible, researchers document adequate information related to demography (e.g., hearing loss, age at onset, amplification usage, etc.) and achievement (e.g., language and communication levels). The documentation of these variable, at least, is critical for proffering evidence-based practices (Council for Exceptional Children, 2014). It is impossible to document or statistically control all factors, as mentioned above, related to inclusive practices. Nevertheless, given our growing understanding of the complexity of inclusion, it is clear that there will be limitations

to macro-level research investigations that need to be highlighted. Recognizing these limitations might diminish the inconsistencies and misinterpretations of findings. We believe that large-scale experimental intervention studies as well as observational, non-experimental investigations might continue to be challenging and rare-albeit we recognize that this is a major approach for evaluating the effectiveness of inclusive programs on a macro level.

There are certainly other types of research designs such as single-case, qualitative, and those associated with action research that can be utilized to evaluate effectiveness for an individual or a small group, who are part of a low-incidence population. These designs, including those associated with research in disability studies seem to be focused on addressing barriers that impede the successful inclusion of individuals in general education classrooms (e.g., Allan & Slee, 2008; Valle & Conner, 2011). In essence, this line of research is not focused on the evaluation of inclusive practices per se; rather, it is motivated by the question: What can be done to create a successful inclusive environment for this particular individual?

LIMITATIONS

Every study has limitations, and the present one is no exception. The validity of a qualitative meta-analysis is dependent on the quality of the selection of studies under review and the accuracy of the interpretations of the present researchers. The focus of this meta-analysis was on the reported findings of primary empirical studies and the balanced interpretations of findings provided by the authors of secondary research reviews.

The meta-analysis of secondary research reviews or of other meta-analyses can pose specific challenges because of the dependence on the reporting of findings based on the quality of studies that were reviewed (e.g., Xie, Potmesil, & Peters, 2014). That is, the interpretations provided in the present study are dependent on the quality indicators or technical merits of investigations that were analyzed by other researchers who conducted the secondary reviews. There are additional caveats to consider when interpreting studies that have utilized surveys (e.g., Eriks-Brophy & Whittingham, 2013; Hung & Paul, 2006; Kluwin, 1993; Powers, 2003). Even with procedures to minimize error, it should be remembered that the survey responses in studies are based on the individual subjective perceptions of participants.

Similar concerns can be raised for investigations that employ the use of self-reports (e.g., Afzali-Nomani, 1995).

The discussion of the above limitations does not diminish the reliability and validity of the investigations that were analyzed. Nevertheless, the conclusions of the present study should be viewed with caution. More important, it is hoped that the present study influences other researchers to conduct similar or additional meta-analyses.

CONCLUSION

It is critical to conduct evidence-based research to understand the effects of inclusion on individuals who are d/Deaf and hard of hearing. As discussed in this article, research on the effects of inclusive education practices requires the consideration of a number of factors and entails the use of different, and often complex, research designs. Future researchers need to be aware of the diversity of demographics in d/Dhh children and adolescents, and the strengths and limitations of assessments, research designs, and teacher practices. Awareness of these quality indicators (or technical merits) and others should minimize the generalization of findings to dissimilar populations of d/Dhh individuals and should enhance the proffering of effective educational implications.

The manner in which inclusion of d/Dhh children and adolescents should be investigated can become extremely political and may impede our growing understanding of this complex construct if we are not considerate of a variety of perspectives. Nevertheless, as noted by Allan and Slee (2008):

Inclusive education is a political imperative and questions of who gets an education and the character of that education compared with others cannot be construed as apolitical. Closing down the discussion or maintaining the barricades in order to feel more confident about one's dogma is not constructive. The technical and political need not always be antithetical. We would argue that an open and respectful conversation about ideology, choices and the impact of these choices on the subjects and products of the research is timely (p. 99).

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PERCEPTION OF ADAPTATION OF A SPATIAL ENVIRONMENT FOR SUCCESSFUL MOVEMENT OF PERSONS WITH DISABILITIES

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ABSTRACT

The aim of the paper is to show differences in the accessibility of the environment between young people with disabilities and young people without disabilities. The sample of respondents consisted of two sub-samples. The first sub-sample was composed of young people with disabilities, chronologically aged 18-35, both sexes 50 of them. The second sub-sample consisted of young people without disabilities, chronologically aged 18-35, both sexes 50 of them, selected by random selection method from the Tuzla Canton area. The data obtained by the research were processed using the method of parametric and nonparametric statistics. Frequencies, percentages and measures of central tendency are calculated (arithmetic mean, standard deviation). To investigate the differences between the tested variables, p-values were used, and variance analysis was used to test the significance of the differences. The obtained results showed that there is a statistically significant difference in the adaptability of space and the accessibility of the environment between young people with disabilities and young people without disabilities. Young people with disabilities are the worst evaluators of the accessibility of public transport and the environment, and the best evaluators of accessibility of housing.
Keywords: young people with disabilities, young people without disabilities, accessibility.

INTRODUCTION

An independent individual is one who does not depend on others or does not want to depend on others, which does not mean that others do not need or do not want them. Being a young person carries a lot of responsibility but also ambition. The desire of every young person is to be independent and successful in all aspects of life. In order to achieve this, family support is necessary, but also certain skills that will facilitate the path to success (Husić-Đuzić, 2016). Negative attitudes on the part of the environment can affect self-confidence of young people with disabilities. The independence of persons with disabilities is particularly affected by the problem of barriers and accessibility. Despite the existence of positive legal regulations on accessibility of the environment for people with disabilities, the same is not fully applied in practice or in some places it is not applied at all.

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All existing institutions are still not sufficiently accessible for people with disabilities. In addition to all of the above, in our country, young people with disabilities sometimes manage to achieve their goals and are very successful in overcoming the obstacles that are on their way. For them as well as for people with disabilities, it is a lifelong learning to be able to live and master all the necessary skills for it. Accessibility means that people with disabilities have access to, on an equal basis with others, physical environment, means of transport, information and communication technologies and systems (ICTs), as well as other facilities and services. In all these areas there are still huge obstacles. In the European Union, on average, only 5% of public websites are fully compliant with Internet accessibility standards. However, many are partially accessible. Many TV broadcasters still have little titled and audio-described programs designed for people with disabilities (European Strategy for People with Disabilities 2010-2020). These measures, which include identifying and removing obstacles and barriers to accessibility, relate, inter alia, to: buildings, roads, transport and other indoor and outdoor spaces, including schools, housing, health facilities and workplaces, information, communications and other services , including electronic services and emergency services. Physical accessibility is important for people with severe mobility and physical disabilities in the selection process, as well as possible later employment. Required accessibility elements are defined in: accessibility elements for overcoming altitude differences (e.g. ramp, staircase, elevator, vertical lifting platform, sloping lifting platform), accessibility elements of independent life (e.g. bathrooms, kitchens, rooms /classrooms/ workspace, coffee shop and restaurant, telephone, text phone, fax, ATM, door handles and windows, counter, desk, orientation plan for the movement in the building etc.) elements of accessibility of public transport (e.g. stop and platform, parking place, etc.). Mandatory elements of accessibility are applied by selecting the most favourable solution in relation to the purpose and other features of the building (Matković & Načinović, 2015). The commitment of the society is to ensure that all persons with disabilities feel less affected by the consequences of disability by providing adequate health care, rehabilitation, a safer environment and raising the awareness of a community that is ready to support people with disabilities (Petition for Support of Persons with Disabilities, 2015). According to the knowledge of oneself, the person sets the expectations of himself. These expectations can be real, but they can be lower or higher than what can really be achieved in a situation (Seligman, 2007). Self-esteem in people with disabilities is defined by the assessment of their own capacities for functioning in the social environment (Omolayo, 2009). Activities of everyday life include tasks for which a person is regularly prepared or as an accessory to participate in his or her social roles and work (Trombly, 1995). Possession and use of social skills of young people with disabilities affects life and professional achievements, social relations, and family relationships (Bratovčić & Galijasevic, 2015). They allow young people with disabilities to solve problems in relation to other people and the ability to control behaviours such as wearing anger and frustration. According to Erikson's theory (Erikson, 2008), the stage of identity formation occurs during adolescence. Due to great biological changes, more complex ways of thinking, redefining oneself within the family, developing new forms of relationships with peers, and adapting to the increasing demands of the education system, adolescents at this stage re-examine themselves and their environment. In order to achieve the basis for a standardized assessment of the functioning of persons, and their interaction with the environment, it is necessary to make a specification for each of the selected functions, activities and environmental factors when there is no damage for the observed variable, if the damage is mild, moderate, severe or complete (Strnad & Benjak, 2010). The social model of disability, therefore, proceeds from the assumption that the position of persons with disabilities is socially conditioned, that is, that social barriers lead to their discrimination, due to unorganized activities of the society in removing obstacles and social constraints (Oliver, 1996). The social model sees disability, as a product of a social context and the environment in which a person is counting and its physical structure, object design, transport and the like (Pešić, 2006). The problem of a person with disabilities is located within an individual, that is, a person with disabilities due to their disability requiring medical intervention, in order to adapt to society.

In addition to the medical model, institutional protection of people with disabilities is closely linked (Crisp, 2000). Terminological interpretations, which emphasize limitation, disturbance and incompetence, relationships between a person and the environment (Howard, 1998).

AIM OF THIS PAPER

The aim of the paper is to determine the differences in the perception of the accessibility of the environment between young people with disabilities and young people without disabilities.

WORK METHODS

Sample of respondents

The sample of respondents consisted of two subsamples. The first sub-sample consisted of young people with disabilities, chronological ages 18-35 years, both sexes, 50 of them. The second subunit consisted of young people without disabilities, chronological age 18-35 years, both sexes, 50 of them, selected by random selection method from the Tuzla Canton area.

Method of conducting research

The research was conducted over a period of two months during which field testing was carried out. Each respondent answered independently after previously receiving instructions from the interviewers. Respondents were asked to express their agreement or disagreement, or the degree of agreement or disagreement with the views expressed in the assertions. Young people with disabilities are interviewed individually. The time that was scheduled for the interview with each respondent is 15-25 minutes. Young people without disabilities are interviewed in groups. The time required to complete the questionnaires provided by this study is 15 minutes. All respondents were familiar with the research goal and were informed about how to complete the questionnaire.

Measuring instruments

For the purposes of this research, a Questionnaire was used to examine the self-assessment of the adaptability of space and accessibility of the environment (Bratovčić & Mehmedinović, 2015) and it examines the following problem areas: Accessibility of housing, Accessibility of public transport, Accessibility of the environment, Accessibility of cultural institutions, Accessibility of administrative institutions, Accessibility of health institutions, Accessibility of self-service, café Accessibility, restaurant Accessibility, school / faculty Accessibility. The respondents' task is to have a scale of 1 to 5 assessments in which the space is suitably adapted, i.e. an accessible environment, where 1 means that it is very poor, and 5 means that adaptability / accessibility is very good.

Data processing methods

The data obtained by the research were processed using the method of parametric and nonparametric statistics. Frequencies, percentages and measures of central tendency are calculated (arithmetic mean, standard deviation). To investigate the differences between the tested variables, p-values were used, and variance analysis was used to test the significance of the differences. The data is shown in the table. The data was processed in the statistical package SPSS 16 for Windows.

RESULTS

In order to examine the perception of environmental adaptation to persons with disabilities and to determine the differences in the perception of environmental adaptability by persons with disabilities and persons without disabilities, a questionnaire was applied with a set of questions related to the assessment of the adaptability of housing, public transport and the environment, cultural, administrative, health and educational institutions. Table 1 shows the average values of assessments given in self-assessment of space adaptability and accessibility of the environment by young people with disabilities and young people without disabilities.

Table 1. Differences in accessibility of the environment between young people with disabilities and young people without disabilities

Questions	Control group	Experimental group	p
	$\mu \pm \sigma$	$\mu \pm \sigma$	
Accessibility of housing			
Kitchen	4.74 ± .53	4.20 ± 1.03	.00
Bedroom	4.74 ± .53	4.26 ± .94	.00
Toilet	4.76 ± .48	4.24 ± .96	.00
Living room	4.76 ± .48	4.24 ± .96	.00
Entrance	4.66 ± .75	3.98 ± 1.32	.00
Accessibility of public transport and environment			
Accessibility of public transport	4.04 ± 1.47	2.82 ± 1.51	.00
Accessibility to the environment	4.10 ± 1.45	3.00 ± 1.41	.00
Accessibility of cultural institutions			
Theatre	4.44 ± .95	3.16 ± 1.20	.00
Cinema	4.50 ± .76	3.18 ± 1.24	.00
Cultural Centre	4.52 ± .74	3.12 ± 1.19	.00
Library	4.46 ± .89	3.18 ± 1.22	.00
Accessibility of sports facilities	4.54 ± .73	3.22 ± 1.17	.00
Accessibility of administrative institutions			
Administration	4.42 ± .95	3.08 ± 1.14	.00
Centre for Social Work	4.38 ± 1.05	3.06 ± 1.24	.00
Employment office	4.38 ± 1.05	3.04 ± 1.19	.00
Accessibility of health institutions			
Health centre / clinic	4.38 ± 1.10	3.00 ± 1.25	.00
Hospital	4.46 ± .99	3.12 ± 1.22	.00
Accessibility of other objects			
Accessibility of self-service	4.74 ± .56	3.74 ± 1.12	.00
café Accessibility	4.68 ± .62	3.66 ± 1.21	.00
restaurant Accessibility	4.68 ± .62	3.66 ± 1.17	.00
school / faculty Accessibility			
Entrance	4.28 ± 1.16	3.38 ± 1.10	.00
Classroom	4.20 ± 1.25	3.48 ± 1.03	.00
Toilet	4.18 ± 1.27	3.40 ± 0.97	.00
Laboratory	4.20 ± 1.25	3.40 ± 0.99	.00
Library	4.26 ± 1.19	3.44 ± 1.03	.00

Based on the data presented in Table 1, it can be seen that there is a statistically significant difference ($p < .05$) in the average assessment of the adaptability of space and the accessibility of the environment between young people with disabilities and young people without disabilities. Adaptability of space and accessibility of the environment is estimated on average by a higher rating in young people without disabilities, unlike in young people with disabilities. Young people with disabilities are the worst evaluators of the accessibility of public transport and the environment, and the best evaluators of accessibility of housing.

DISCUSSION

People with disabilities have the option of choosing their place of residence, where and with whom they will live, on equal terms with others, and that they are not forced to live under a particular program, they have access to a number of support services in their homes, accommodation facilities and other support services in the local community, including personal assistance needed to support life and community involvement, and to prevent isolation or exclusion from the community. Services in the local community, equipment and facilities intended for the general population are available on an equal footing to persons with disabilities and are in line with their needs (Vučenović & Mastikosa, 2011).

According to the report of the Ministry of Health of Serbia (2006), only 37% of young people are thinking about their health when choosing a diet. The regularity of hygienic habits (showering and tooth brushing) among youth in the Republic of Serbia declined in 2006 compared to 2000 and is less pronounced in the population of those living in poverty. There is still a small number of interventions and programs aimed at particularly vulnerable groups of young people. The percentage of those with some form of chronic illness is, as a rule, higher among poorer groups than among those who live with monthly incomes above the poverty line. This difference is particularly noticeable when chronic illnesses that lead to some form of long-term incapacity - disability (20%) among people living in poverty and (7%) among those living above the poverty line are observed. In one part of the youth population, who live with disabilities or have other developmental difficulties, there is an accumulation of unfavourable conditions in terms of additional activities of the poverty factor.

Young people with disabilities are better able to assess the ability to do things the way they want and when they want, compared to their parents, also a higher percentage of young people with disabilities (67.5%) think they are capable of taking care of themselves (to make food, to maintain hygiene, to clean house, and clothing), from the parents of persons with disabilities. On the other hand, in the same research, it is stated that parents consider that young people with disabilities can decide on their movement where and when they want (with or without additional support or assistance), which disagrees with young people with disabilities (Mehmedinović &

Bratovčić, 2015). According to the research "Comparative research on the quality of employment of people with disabilities", the results showed that, out of the total number of respondents, 92.2% answered the question that relates to the support of other persons in carrying out activities of everyday life. More than half of this number believes that they do not need any support from other people in performing these activities (63.3%). Among respondents who stated that they need support in daily life activities, they mostly refer to performing administrative work, leaving the place of residence, doing housework, moving and transport (Ljubinković, 2009). The results of the survey show that people with disabilities usually need the following types of support: support in movement and transportation, support related to the procurement of household tasks, support for social contacts, support for the maintenance of personal hygiene, assistance in education, support for the performance of professional obligations, support for nutrition (Rajkov & Ljubinković, 2001). Personal assistant support relates to support related to: personal care (hygiene, dressing, toilet needs and the like), grocery and meal preparation, home affairs - washing clothes, dishes, maintenance of home hygiene, home budget management, communication support, telephone use, medical services (e.g. drug delivery, catheterization, respiratory pumps), adapting the living space to the needs of service users, supporting the use of supplies, transfer support (bed - wheelchairs, carriages, etc.) (Dinkić & Momčilović, 2005). Support for movement, transportation and more. The results of the research and analysis (ACED, 2014) show that the legislative framework in the areas of accessibility, education, health care, work and employment, social protection is largely aligned with the provisions of the UN Convention, but that there are problems in practice mostly due to the lack of proper the mechanisms necessary for their implementation, such as regulations, decisions, regulations or guidelines, or because they have not allocated funds in the budget for their implementation.

CONCLUSION

On the basis of the obtained research results that show that there is a statistically significant difference ($p < .05$) in the average assessment of the adaptability of space and the accessibility of the environment to persons with disabilities between young people with disabilities and young people without disabilities.

Adaptability of space and accessibility of the environment is estimated on average by a higher rating by young people without disabilities. Young people with disabilities are the worst evaluators of the accessibility of public transport and the environment, and the best evaluators of accessibility of housing. Appropriate support for children and young people with disabilities at all levels of education should be provided with the aim of achieving the highest quality of academic and personal skills necessary for independence and employment.

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OCCUPATIONAL THERAPY AND LEISURE TIME OF PERSONS WITH DEVELOPMENTAL DIFFICULTIES

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ABSTRACT

*Introduction: Occupations can be divided into three subcategories: activities that are socially expected, activities that affirm health and support maintenance of health and leisure activities. Leisure time activities are an individual choice from personal interests and values, not because of the expectations of the environment. Leisure time activities can be divided into three basic groups: activities for rest, recreation and personal development. **Goals**: Occupational therapy and leisure time of persons with developmental difficulties are determining the duration of activities that are carried out due to rest, various forms of recreation and personal development and their mutual relationship. **Results**: In total 121 persons with cerebral palsy participated in the workshops of the Cerebral palsy associations of Federation of Bosnia and Herzegovina, 52 (42.98%) from Sarajevo, 14 (11.58%) from Gorazde, 29 (23.97%) from Zenica, 9 (7.43%) from Sapna and 17 (14.05%) from the Center „Koraci nade" (Steps of hope) from Tuzla. Of the total sample (121 respondents) one hour per day listened to the music 29 (23.97%) participants, 2 hours 26 (21.49%), 3 and more hours 59 (48.76%) and not listen to the music at all 7 participants (5.78%). Of the total sample per day 1-hour watches TV and uses internet 20 (16.53%) participants, 2 hours 35 (28.92%), 3 and more hours 60 (49.59%) and no TV viewing or internet use 6 (4.96%) participants. For all four Associations, members of the Cerebral palsy associations of Federation of FBiH and the Center "Koraci nade", Tuzla, for leisure activities directed to rest, there is a statistically significant difference in the time spent in the activities: $\chi2 = 55.071$; $df = 6$; $p < .0001$. For all four Associations, members of the Cerebral palsy associations of FBiH and Center "Koraci nade", Tuzla, there is a statistically significant difference in the frequency of participation in cultural and sports activities: $\chi2 = 162.758$; $df = 12$; $p < .0001$. For all four Associations, members of the Cerebral palsy associations of Federation of FBiH and Center "Koraci nade", Tuzla, there is a statistically significant difference in time spent with companions, friends: $\chi2 = 34.137$; $df = 2$; $p < .0001$. **Discussion**: In the study by Mlinarević **The Styles of Leisure Time of High School Pupils in Slavonija and Baranja**, 2004, outlined 43 leisure activities. The author combines the four leisure time styles: elite, hedonistic, sport-recreational and traditional-(non) conventional.*

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Conclusion: Inclusive policy should be represented in the curricula of all kindergartens, schools and faculties with planned leisure time activities. An integral part of all therapeutic approaches to persons with developmental difficulties should be the training of persons with developmental difficulties and their families for the adequate use of leisure time. Working with parents/family through "family-oriented practice" is a challenge for occupational therapists and other professionals in health care services and requires a significant change from a traditional child-centered approach. Systematic development of methodology of leisure time research and interdisciplinary approach to this vital problem is needed.

***Key words**: occupational therapy, leisure activities, developmental difficulties*

INTRODUCTION

In the sociological sense, "leisure time" is defined as a time that is "out of work obligations, family duties and physiological needs, which an individual has at his own discretion and preferences, or time of active rest, recreation, positive development, socialization, humanization and creative personality confirmation. In the pedagogical literature, the term "leisure time" means "the time that an individual fills and shapes according to its own desires without any obligation and necessity" (Žiga et al., 2015).

Leisure time today is a modern and complex phenomenon, which is part of every man's life, every day and in every environment, but different in terms of age, gender, occupation, place of residence, development of the environment, degree of interest etc. Children's leisure time is the time left after completion of all school and work obligations.

Leisure time today is a modern and complex phenomenon, which is part of every man's life, every day and in every environment, but different in terms of age, gender, occupation, place of residence, development of the environment, degree of interest etc. Children's leisure time is the time left after completion of all school and work obligations. Work and leisure are natural, inseparable activities and human determinations. In modern conditions, it is difficult to plan and organize leisure time because there are so many content that somehow "abduct" our space of leisure time.

Occupations can be divided into three subcategories: activities that are socially expected, activities that affirm health and serve to maintain health and leisure activities.

1. *Activities that are socially expected* are those that an individual carries out in accordance with its age: going to school, earning a living, spouse's roles, child care or retirement.

2. *Activities that affirm health and care for its maintenance* are home assignments and tasks related to self-care. They affirm and maintain physical, mental and spiritual health: feeding, sleeping, brushing, bathing, finding and using shelters in case of bad weather, keeping the living space clean, visiting religious gatherings.

3. *Leisure activities* are chosen by individuals from their personal interests and values, not because of their environment expectations (Brumnić & Šimunović, 2017).

Leisure activities can be divided into three basic groups: activities for rest, recreation and personal development (Livazović, 2015).

1. *Activities for relaxation*, without any special and intense physical or psychological involvement in a home, public place or nature. They are needed for life and work.

2. *Activities for recreation*, with active rest, healthy entertainment or entertainment - walking, excursions, visiting sports and other events, tracking events on the radio, television, going to the cinema, theater, social gaming...

3. *Personality development activities* through various fields: educational, artistic, physical, technical, social and so on.

Working with parents/family through "family-oriented practice" is a challenge for occupational therapists and other professionals in health care services and requires a significant change from a traditional child-centered approach.

Whether and how happy and healthy is a child can be seen by not showing tiredness during the day, disinterest, lacks any problems with appetite or immunity, has time to socialize with friends, perform work tasks with joy. If there is too much obligation, the child will feel permanent tiredness, act listless and tense, complaining of headaches, lagging in performance, and the like.

The number of leisure activities per person depends on their age, their talents, and their emotional, physical and intellectual maturity, wishes and family circumstances.

It is important to balance between life in and out of the family.

In clinical work with children with developmental difficulties, far greater progress has been made than it was previously considered feasible. Although the individual potential is not unlimited, most children have a wide range of potential abilities. However, the way in which it develops depends largely on the type of experience involved (Stanley et al., 2003).

Occupational therapy has an important role in facilitating and assisting children with developmental difficulties in their first years of life. The role of early intervention is to provide services based on the family orientated model (Pačo et al., 2015).

GOAL

Occupational therapy and leisure time of persons with developmental difficulties are determining the duration of activities that serve the relaxation, various forms of recreation and personal development, and their mutual relationship.

METHOD

The Project of Cerebral palsy associations of FBiH (Alliance) *Inclusion of Persons with Cerebral Palsy and Inactivity Osteoporosis* (Project) is a research, diagnostic and educational project, with a duration of six months. The research is prospective, controlled and descriptive.

The users of the service (*sample*) were families who have members with the cerebral palsy, and are members of four Associations, members of the Alliance and users of the Center "Koraci nade" from Tuzla. Out of the total sample, there were 27 families who had children with CP (12 girls and 15 boys), at age from 9 to 17 years.

Project Objectives

- Improvement and preservation of the functional ability of persons with cerebral palsy for self-care, work and leisure activities: adoption of new postural patterns, protective movements and positions, providing suggestions for the scope and type of physical activity, home physical and occupational therapy, as well as recommendations for proper nutrition and psychological support.
- Education of members of the Cerebral palsy associations of FBiH and teachers through workshops and lectures in Tuzla, Zenica, Gorazde and Sarajevo.
- Family members' education on how to organize leisure time spent in recreational activities, various forms of recreation, and personality development activities.

Within the Project, through the workshops "Leisure Time of Persons with Developmental Difficulties" was conducted a study Occupational *Therapy and Leisure Time of Persons with Developmental Difficulties*. As part of the workshops, the workbook "Leisure time for persons with developmental difficulties" was created for this study, which contains 8 questions about time spent in leisure activities. Three questions related to leisure activities (listening to music, time spent on TV, internet and inactivity/"idleness"). Two questions related to social interaction and peer relationships, and three questions related to activities for recreation and personality development. The questionnaire was published in the book *Inclusive Practice Part I - Rehabilitation in Inclusion*, (Švraka, et al., 2018).

RESULTS

121 persons with cerebral palsy from 5 cities participated in the workshops: 52 (42.98%) from Sarajevo, 14 (11.58%) from Gorazde, 29 (23.97%) from Zenica, 9 (7.43%) from Sapna and 17 (14.05%) from the Center "Koraci nade" from Tuzla.

Activities for rest/relaxation

Table 1. Ratio between leisure time spent listening to music and cities of respondents

Activity duration	Associations					Total
	Sarajevo	**Goražde**	**Zenica**	**Sapna**	**Tuzla***	
hours	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
1	9 (17.3)	4 (28.6)	7 (24.1)	4 (44.4)	5 (29.4)	29 (23.97)
2	3 (5.8)	4 (28.6)	7 (24.1)	3 (33.3)	9 (52.9)	26 (21.49)
3 and more	37 (71.1)	6 (42.8)	12 (41.4)	2 (22.2)	2 (11.8)	59 (48.76)
does not listen to music	3 (5.8)	0	3 (10.3)	0	1 (5.9)	7 (5.78)
Total	**52 (42.98)**	**14 (11.57)**	**29 (23.97)**	**9 (7.43)**	**17 (14.05)**	**121 (100.00)**

*Tuzla – Center „Koraci nade"

Of the total sample (121 respondents) one hour per day listen to music 29 (23.97%) of the respondents, 2 hours 26 (21.49%), 3 and more hours 59 (48.76%) and 7 (5.78%)respondents do not listen to the music.

There is a statistically significant difference in leisure time spent listening to the music according to the cities of the respondents:
$\chi2 = 31.904$; df = 12; p = .0014.

Table 2. Relationship of leisure time spent watching TV and internet usage and cities of respondents

Activity duration	Cities					Total
	Sarajevo	**Goražde**	**Zenica**	**Sapna**	**Tuzla**	
hours	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
1	5 (9.6)	2 (14.3)	4 (13.8)	3 (33.3)	6 (35.3)	20 (16.53)
2	13 (25.0)	7 (50.0)	7 (24.1)	2 (22.2)	6 (35.3)	35 (28.92)
3 and more	30 (57.7)	5 (35.7)	16 (55.2)	4 (44.4)	5 (29.4)	60 (49.59)
Does not watch TV	4 (7.7)	0	2 (6.9)	0	0	6 (4.96)
Total	**52 (42.98)**	**14 (11.57)**	**29 (23.97)**	**9 (7.43)**	**17 (14.05)**	**121 (100.00)**

Of 121 respondents one hour per day watch TV and use internet 20 (16.53%) of respondents, 2 hours 35 (28.92%), 3 and more hours 60 (49.59%) and 6 (4.96%) of respondents does not watch TV or use the Internet.

There is no statistically significant difference in leisure time spent watching TV and using the Internet, according to cities of respondents: $\chi2 = 15.716$; df = 12; p = .2046.

Table 3. Relationship of leisure time spent in inactivity ("do nothing") and cities of respondents

Activity duration	Cities					Total
	Sarajevo	**Goražde**	**Zenica**	**Sapna**	**Tuzla**	
hours	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
1	13 (25.0)	5 (35.7)	6 (20.7)	2 (22.2)	11 (64.7)	37 (30.58)
2	10 (19.2)	4 (28.6)	8 (27.6)	3 (33.3)	4 (23.5)	29 (23.97)
3 and more	10 (19.2)	2 (14.3)	7 (24.1)	4 (44.4)	2 (11.8)	25 (20.66)
Completely	19 (36.5)	3 (21.4)	8 (27.6)	0	0	30 (24.79)
Total	**52 (42.98)**	**14 (11.58)**	**29 (23.97)**	**9(7.43)**	**17 (14.05)**	**121 (100.00)**

Of the 121 respondents, 37 (30.58%) of respondents one hour daily "do nothing", 2 hours "does nothing" 29 (23.97%), 3 and more hours 25 (20.66%) and all day/totally "do nothing" 30 (24.79%) of the respondents.

There is a statistically significant difference in leisure time spent in inactivity between the cities of respondents: $\chi^2 = 22.464$; df = 12; p = .0326.

Table 4. Relaxation activities - Association of children with cerebral palsy in Canton Sarajevo

	Listen to music	Watch TV and use Internet	Does nothing
Activity duration	N (%)	N (%)	N (%)
1 hour	9 (17.3)	5 (9.6)	13 (25.0)
2 hours	3 (5.8)	13 (25.0)	10 (19.2)
3 and more hours	37 (71.1)	30 (57.7)	10 (19.2)
Without activity	3 (5.8)	4 (7.7)	19 (36.5)
Total	**52 (100)**	**52 (100)**	**52 (100)**

There is a statistically significant difference in the time spent in relaxation activities: $\chi^2 = 3.470$; df = 6; p < .0001.

Daily listen to music for one hour 9 respondents (17.3%), two hours 3 respondents (5.8%), three and more hours daily 37 (71.1%), and does not listen to music 3 (5.8%). Listening to music can only mean that activity, and the result of 37 persons (71.1%) suggests that most persons with cerebral palsy (CP) are engaged in activities that only serve the relaxation, unless they listen to music with other activities. A total of 48 (92.3%) persons with CP ***spend time with television or the Internet***, while only 4 persons (7.7%) do not spend time with TV and

Internet. The difference is in the duration of activity during the day so that 5 subjects (9.6%) spend one hour per day with TV and internet, two hours daily 13 (25.0%), three and more hours 30 (57.7 %) of respondents.

They do nothing, for one hour 13 (25.0%) respondents, 2 hours a day 10 (19.2%), 3 or more hours a day 10 (19.2%), and does not do any relaxation activities all day 19 respondents (36.5%). Data on not doing anything 3 or more hours a day, as well as throughout the day, 29 (55.8%) respondents give a picture of the quality of leisure time, more so if the respondents were not engaged in school or other work activities during the day.

Table 5. Relaxation activities - Center "Koraci nade", Tuzla

	Listen to music	Watch TV and use Internet	Does nothing
Activity duration	N (%)	N (%)	N (%)
1 hour	5 (29.4)	6 (35.3)	11 (64.7)
2 hours	9 (52.9)	6 (35.3)	4 (23.5)
3 and more hours	2 (11.8)	5 (29.4)	2 (11.8)
Without activity	1 (5.9)	0	0
Total	**17 (100)**	**17 (100)**	**17 (100)**

There is no statistically significant difference in the time spent in relaxation activities: $\chi^2 = 8.818$; df = 6; p = .1841. One-hour daily ***listening to the music*** 5 respondents (29.4%), two hours 9 respondents (52.9%), three hours and more 2 (11.8%), and one does not listen to music (5.9%). The majority of persons with CP listen to music two hours a day, then one hour a day, three or more hours listen to music a smaller number of persons, while only one person does not listen to music.

All 17 persons with CP spend time ***with television or the Internet***. The difference is in the duration of activity dur-

ing the day, so that one hour of this activity per day have 6 respondents (35.3%), two hours daily 6 (35.3%), three hours and more 5 (29.4%) respondents.

Does not have these activities during the day, for one hour 11 (64.7%) respondents, 2 hours a day (23.5%), and 2 (11.8%) do not do anything for three hours or more daily. Although it is a small number of respondents, the fact that 2 (11.8%) of respondents do nothing during the day, three or more hours a day, points to inadequate and inhumane leisure time, more so if the respondents are not engaged in school or work activities during the day.

Table 6. Relaxation activities – Association of persons with cerebral palsy and other difficulties Sapna

	Listen to music	Watch TV and use Internet	Does nothing
Activity duration	N (%)	N (%)	N (%)
1 hour	4 (44.5)	3 (33.3)	2 (22.2)
2 hours	3 (33.3)	2 (22.2)	3 (33.3)
3 and more hours	2 (22.2)	4 (44.5)	4 (44.4)
Without activity	0	0	0
Total	**9 (100)**	**9 (100)**	**9 (100)**

There is no statistically significant difference in the time spent in relaxation activities: $\chi2 = 1.717$; $df = 4$; $p = .7877$. Daily ***listening to music*** for one hour 4 respondents (44.5%), two hours 3 respondents (33.3%), three and more hours daily 2 (22.2%). There are no respondents who do not listen to music. All 9 respondents ***spend time with television or the internet***. The difference is in the duration of activity during the day so that one hour of this activity per day have 3 respondents (33.3%), 2 hours daily 2 (22.2%), 3 hours and more 4 (44.5%) respondents. ***During the day they do nothing***, one hour per day 2 (22.2%), two hours a day 3 (33.3%), while three or more 4 (44.4%) respondents do not do anything for three or more hours a day.

Table 7. Relaxation activities - Cantonal Association of Parents of Patients with Cerebral Palsy of Microcephaly and Hydrocephalus "Dlan" (Palm), Zenica

	Listen to music	Watch TV and use Internet	Does nothing
Activity duration	N (%)	N (%)	N (%)
1 hour	7 (24.1)	4 (13.7)	6 (20.7)
2 hours	7 (24.1)	7 (24.1)	8 (27.6)
3 and more hours	12 (41.5)	16 (55.3)	7 (24.1)
Without activity	3 (10.3)	2 (6.9)	8 (27.6)
Total	**29 (100)**	**29 (100)**	**29 (100)**

12 (41.5%), does not listen to music 3 (10.3%) respondents. The highest number of respondents listen to music three or more hours a day (41.5%), then listening to music for one or two hours 7 (24.1%), and 3 respondents (10.3%) does not listen to music. Listening to music can also imply engaging in other activities, and only in that case can be satisfied with the results.

27 (93.1%) of respondents spend **time with television, internet**, 2 (6.9%) respondents do not spend time with TV and the Internet. The difference is in the duration of activity during the day, so that on one-hour activity daily have 4 (13.7%) respondents, two hours daily 7 (24.1%), three hours and more 16 (55.3%) respondents.

During the day they do nothing, for one hour daily 6 (20.7%) of respondents, 2 hours a day 8 (27.6%), and 7 (24.1%) do nothing for three or more hours daily, all day do nothing 8 (27.6%) of the respondents, 15 (51.7%) of respondents do not do anything three or more hours throughout the day.

Table 8. Relaxation activities - Association of patients with cerebral palsy and dystrophy BPK Gorazde

	Listen to music	Watch TV and use Internet	Does nothing
Activity duration	N (%)	N (%)	N (%)
1 hour	4 (28 6)	2 (14.3)	5 (35.7)
2 hours	4 (28.6)	7 (50.0)	4 (28.6)
3 and more hours	6 (42.8)	5 (35.7)	2 (1.3)
Without activity	0	0	3 (21.4)
Total	**14 (100)**	**14 (100)**	**14 (100)**

There are no statistically significant differences in the time spent in relaxation activities: χ2 = 10,473; df = 6; p = .1061.

Out of a total of 14 respondents, one hour *per day is listening to music* 4 (28.6%), two hours 4 (28.6%), three hours and more 6 (42.8%), all respondents listening to music. The largest number of 6 (42.8%) persons with CP listen to music three and more hours a day, one hour a day and two hours a day listen to music by 4 (28.6%) of the respondents. Listening to music can also involve doing other activities, only in this case we may be satisfied with the results.

All 14 (100.0%) respondents spend time *with television, the Internet*. The difference is in the duration of activity during the day so that 2 (14.3%) respondents spend one hour a day on TV and the Internet, two hours a day 7 (50.0%), three and more hours a day 5 (35.7 %) of respondents. In the Association of Cerebral Palsy and Dystrophy of Bosnian-Podrinje Canton Gorazde the time spent with TV for two hours a day reported 7 (50.0%) of respondents and it is the recommended time.

During the day do nothing, for one hour per day 5 (35.7%) respondents, two hours a day 4 (28.6%), while three or more hours 2 (14.3%) respondents, and doing nothing throughout the day nothing 3 (21.4%) of the respondents. 5 (35.7%) of respondents did not do anything three or more hours during the day.

Table 9. Leisure activities that facilitate relaxation for all respondents

	Listen to music		Watch TV and use Internet		Does nothing	
Activity duration	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
1 hour	29	24.0	20	16.5	37	30.6
2 hours	26	21.5	35	28.9	29	23.9
3 and more hours	59	48.7	60	49.6	25	20.7
Without activity	7	5.8	6	5	30	24.8
Total	**121**	**100**	**121**	**100**	**121**	**100**

Table 9 presents the data for all four Associations, members of the Cerebral palsy associations of Federation of Bosnia and Herzegovina and the Center "Koraci nade", Tuzla, for leisure activities that facilitate relaxation. There is a statistically significant difference in the time spent in relaxation activities: χ2 = 55.071; df = 6; p < .0001.

Daily *listening to music* for one hour 29 (24.0%) of respondents, two hours 26 (21.5%), three and more hours 59 (48.7), 7 (5.8%) respondents does not listen to music. Most respondents listen to music three or more hours a day 59 (48.7%), approximately the same number listening to music one or two hours a day, while 7 (5.8%) respondents do not listen to music.

One hour per day in front of TV time and on Internet spend 20 (16.5%), two hours a day 35 (28.9%), three and more hours per day 60 (49.6%) respondents.

Doing nothing during the day, for one hour 37 (30.9%) of the respondents, 29 (24.0%) two hours a day, three or more hours 25 (20.7%), and do nothing during the whole day 30 (24.8%) of the respondents. Do nothing for 3 or more hours a day, as well as throughout a day a total of 55 (45.5%) respondents.

Activities for recreation and personality development

Table 10. Cultural-Sports Activities - Association of children with cerebral palsy in Canton Sarajevo

	Goes to cinema. theater	Engaged in sports	Have hobby
Activity duration	N (%)	N (%)	N (%)
1 hour weekly	0	5 (9.6)	6 (11.5)
2 hours weekly	0	6 (11.5)	12 (23.1)
3 hours weekly	0	2 (3.8)	1 (1.9)
1 per week	0	0	0
1 per months	9 (17.3)	0	0
1 per year	11 (21.2)	0	0
No activity	32 (61.5)	39 (75.0)	33 (63.5)
Total	**52 (100)**	**52 (100)**	**52 (100)**

In Table 10, are presented data on the activities of persons with CP, which are more intent on personal development, through different areas of physical, educational, social and similar activities, as well as activities that make various forms of recreation, active vacation, healthy recreation or entertainment. There is a statistically significant difference in the frequency of participation in cultural-sports activities: $\chi2 = 60.463$; df = 10; p< .0001.

Going to cinema, theater once a month 9 (17.3%) of respondents, once a year 11 (21.2%), does not go to the cinema, theater 32 (61.5%) of the respondents.

They do sports once a week 5 (9.6%), two hours per week 6 (11.5%), three hours per week 2 (3.8%), are not involved in sport 39 (75.0%) of respondents. Most of the respondents are not engaged in sports. The content of leisure time includes a variety of ***activities-hobbies*** and engaging in these activities points to the close relationship of the respondents with that activity. Involved in hobbies one hour per week are 6 (11.5%) of respondents, 2 hours a week 12 (23.1%), 3 and more hours a week 1 (1.9%). Without hobbies are 33 (63.5%) of respondents.

Table 11. Cultural-Sports Activities – Center "Koraci nade"

	Goes to cinema. theater	Engaged in sports	Have hobby
Activity duration	N (%)	N (%)	N (%)
1 hour weekly	0	2 (11.8)	4 (23.5)
2 hours weekly	0	0	2 (11.8)
3 hours weekly	0	5 (29.4)	6 (35.3)
1 per week	1 (5.9)	0	0
1 per months	4 (23.5)	0	0
1 per year	5 (29.4)	0	0
No activity	7 (41.2)	10 (58.8)	5 (29.4)
Total	**17 (100)**	**17 (100)**	**17 (100)**

Table 11 shows data on the activities of persons with CP, who are more likely to develop their personality, through various areas of physical, educational, educational, social and similar activities as well as activities that make various forms of recreation, active recreation, healthy recreation or fun.

There is a statistically significant difference in the frequency of participation in cultural-sports activities: $\chi2 = 35.364$; df = 12; p = .0004.

Going to cinema, theater once a week is 1 (5.9%) respondent, once a month 4 (23.5%), once a year 5 (29.4%), does not go to the cinema, theater 7 (41.2%) of the respondents.

Involved in sports once a week are 2 (11.8%) of respondents, two hours a week none, three hours a week 5 (29.4%). Participation in sports of persons with cerebral palsy shows that 7 (41.2%) respondents deal with sports, and 10 (58.8%) do not deal with sport at all.

Hobbies practice 1 hour weekly 4 (23.5%) respondents, 2 hours a week 2 (11.8%), 3 and more hours per week 6 (35.3%), without hobbies are 5 (29.4%), while 12 (70.6%) of respondents have hobbies.

Table 12. Cultural-Sports activities - Association of persons with cerebral palsy and other difficulties Sapna

	Goes to cinema. theater	Engaged in sports	Have hobby
Activity duration	N (%)	N (%)	N (%)
1 hour weekly	0	1 (11.1)	1 (11.1)
2 hours weekly	0	1 (11.1)	3 (33.3)
3 hours weekly	0	1 (11.1)	1 (11.1)
1 per week	0	0	0
1 per months	2 (22.2)	0	0
1 per year	0	0	0
No activity	7 (77.8)	6 (66.7)	4 (44.5)
Total	**9 (100)**	**9 (100)**	**9 (100)**

There is no statistically significant difference in the frequency of participation in cultural-sports activities: χ2 = 10.324; df = 8; p = .2430.
Note: All zero values have been dropped out here for 1 time a week, and a small number of cases is influencing the test results.
Going to cinema, theater once a week there is no respondents, once a month 2 (22.2%), once a year no respondents, while in total 7 (77.8%) of the respondents does not go to the cinema, theater.
Dealing with sports once a week is one respondent (11.1%), two hours per week 1 (11.1%), three hours per week 1 (11.1%). Participation in sports of persons with cerebral palsy shows that only 3 (33.3%) of respondents deal with sports, and 6 (66.7%) of respondents from Sapna do not deal with sport at all.
The content of leisure time includes a variety of ***activities-hobbies*** and engaging in these activities points to the close relationship of the subject with that activity. Involved in hobbies for 1-hour weekly is 1 (11.1%) respondent, 2 hours weekly 3 (33.3%), 3 and more hours per week1 (11.1%), while no hobbies have 4 (44.5%), respondents.

Table 13. Cultural-Sports Activities - Cantonal Association of Parents of Persons with Cerebral Palsy, Microcephaly and Hydrocephalus "Dlan", Zenica

	Goes to cinema. theater	Engaged in sports	Have hobby
Activity duration	N (%)	N (%)	N (%)
1 hour weekly	0	3 (10.3)	6 (20.7)
2 hours weekly	0	1 (3.4)	2 (6.9)
3 hours weekly	0	1 (3.4)	6 (20.7)
1 per week	1 (3.4)	0	0
1 per months	5 (17.3)	0	0
1 per year	6 (20.7)	0	0
No activity	17 (58.6)	24 (82.8)	15 (51.7)
Total	**29 (100)**	**29 (100)**	**29 (100)**

There is a statistically significant difference in the frequency of participation in cultural-sports activities: χ2 = 43.250; df = 12; p < .0001
Going to cinema, theater once a week is 1 (3.4%) respondent, once a month 5 (17.3%), once a year 6 (20.7%) respondents, not going to the cinema, theater 17 (58.6%) of respondents.
Engaged in sports once every week are 3 (10.3%) of respondents, two hours per week 1 (3.4%), three hours per week 1 (3.4%), do not deal with sports 24 (82.8%) respondents. Most of the respondents do not deal with sports.
Hobbies were practiced for 1 hour per week by 6 (20.7%), 2 hours per week 2 (6.9%), 3 and more hours per week by 6 (20.7%) respondents. Without hobbies are 15 (51.7%) respondents.

Table 14. Cultural-sports attitudes - Association of Persons with Cerebral Palsy and Dystrophy BPK Goražde

	Goes to cinema. theater	Engaged in sports	Have hobby	Goes to cinema. theater
Activity duration	N (%)	N (%)	N (%)	N (%)
1 hour weekly	0	0	2 (14.3)	2
2 hours weekly	0	1 (7.1)	2 (14.3)	3
3 hours weekly	0	0	1 (7.1)	1
1 per week	0	0	0	0
1 per months	4 (28.6)	0	0	4
1 per year	1 (7.1)	0	0	1
No activity	9 (64.3)	13 (92.9)	9 (64.3)	31
Total	**14 (100)**	**14 (100)**	**14 (100)**	**42**

There is no statistically significant difference in the frequency of participation in cultural-sports activities: χ2 = 19.02; df = 10; p = .0399.
Going to cinema, theater once a month are 4 (28.6%), once a year 1 (7.1%), does not go to the cinema, theater 9 (64.3%) of the respondents.
Involved in sports once per week is 1 (7.1%) respond-

ent, 2 hours per week 0 (0.0%), 3 hours per week 0 (0.0%), not involved in sports are 13 (92.9%) of respondents,
Hobbies have 1 hour weekly 2 (14.3%) respondents, 2 hours weekly 2 (14.3%) respondents, 3 hours and more 1 (7.1%) respondent. Without hobbies are 9 (64.3%) of respondents.

Table 15. Cultural sports activities

	Goes to cinema. theater	Engaged in sports	Have hobby	Goes to cinema. theater
Activity duration	N (%)	N (%)	N (%)	N (%)
1 hour weekly	0	12 (9.9)	19 (15.7)	31
2 hours weekly	0	9 (7.4)	24 (19.8)	33
3 hours weekly	0	15 (12.4)	17 (14.0)	32
1 per week	2 (1.6)	0	0	2
1 per months	24 (19.8)	0	0	24
1 per year	23 (19.0)	0	0	23
No activity	72 (59.5)	85 (70.2)	61 (50.4)	218
Total	**121 (100)**	**121 (100)**	**121 (100)**	**363**

There is a statistically significant difference in the frequency of participation in cultural sports activities: χ2 = 162.758; df = 12; p < .0001.
Going to cinema, theater once a week are 2 (1.6%) of respondents, once a month 24 (19.8%) of respondents, once a year 23 (19.0%) of respondents, does not go to the cinema, theater 72 (59.5%) of the respondents.
They are *engaged in sports* once a week 12 (9.9%),

two hours per week 9 (7,4%), three hours per week 15 (12,4%), while 85 (70,2%) of respondents are not involved in sports. Most of the respondents are not engaged in sports.
Hobbies activities were conducted for 1 hour per week 19 (15.7%), 2 hours per week 24 (19.8%), 3 and more hours per week 17 (14.0%) of respondents. Without hobbies are 61 (50.4%) respondents.

Social interaction

Table 16. Time spent with friends - Association of children with cerebral palsy of Canton Sarajevo

	Close friends	Time spent with them
Activity duration	N (%)	N (%)
1-2	13 (25)	37 (71.1)
3-more	31 (59.6)	6 (11.5)
No friends	8 (15.4)	9 (17.3)
Total	**52 (100)**	**52 (100)**

There is a statistically significant difference in time spent with friends: χ2 = 28.471; df = 2; p < .0001.
Out of a total of 52 respondents, 13 (25.0%) respondents have one or two friends, while three or more friends have 31 (59.6%) respondents. Without friends

are 8 (15.4%) of the respondents. Time spent with friends for one to two hours a day have 37 (71.1%) of respondents, three or more hours daily with friends 6 (11.5%) of the respondents. Do not spend time with friends 9 (17.3%) of the respondents.

Table 17. Time spent with friends – Center "Koraci nade"

	Close friends	Time spent with them
Activity duration	N (%)	N (%)
1-2	4 (23.5)	5 (29.4)
3-more	13 (76.5)	12 (70.6)
No friends	0	0
Total	**17 (100)**	**17 (100)**

There is no statistically significant difference in time spent with friends: $\chi 2=0$; df = 1; p =1
Out of a total of 17 respondents from the Center "Koraci nade", Tuzla, 5 (29.4%) respondents have one or two friends, while three or more friends have 12 (70.6%) respondents.
Time spent with friends for 1 to 2 hours per day have 4 (23.5%) of respondents, 12 (70.6%) of respondents spend three or more hours daily with friends.

Table 18. Time spent with friends - Association of persons with cerebral palsy and other difficulties Sapna

	Close friends	Time spent with them
Activity duration	N (%)	N (%)
1-2	2 (22.2)	2 (22.2)
3-more	6 (66.7)	6 (66.7)
No friends	1 (11.1)	1 (11.1)
Total	**9 (100)**	**9 (100)**

There is no statistically significant difference in time spent with companions, friends: $\chi 2 = 0$; df = 2; p = 1
Out of a total of 9 respondents from Sapna, 2 (22.2%) respondents have one or two friends, while three and more friends have 6 (66.7%) of respondents. Without friends is 1 (11.1%) respondent. Time spent with friends for 1 to 2 hours a day have 2 (22.2%) of respondents, 6 (66.7%) of respondents spend three or more hours daily with friends. Do not spend time with friends 1 (11.1%) a respondent.

Table 19. Time spent with friends - Cantonal Association of Parents of Patients with Cerebral Palsy, Microcephaly and Hydrocephalus "Dlan", Zenica

	Close friends	Time spent with them
Activity duration	N (%)	N (%)
1-2	4 (13.8)	14 (48.3)
3-more	17 (58.6)	7 (24.1)
No friends	8 (27.6)	8 (27.6)
Total	**29 (100)**	**29 (100)**

There is a statistically significant difference in time spent with friends: $\chi 2 = 9.722$; df = 2; p = .0077
Out of a total of 29 respondents, 4 (13.8%) respondents have one or two friends, while three or more friends have 17 (58.6%) of the respondents. Without friends are 8 (27.6%) of the respondents. Time spent with friends for one to two hours a day have 14 (48.3%) respondents, three or more hours daily with friends spend 7 (24.1%) of the respondents. Do not spend time with friends 8 (27.6%) of the respondents.

Table 20. Time spent with friends - Association of persons with cerebral palsy and dystrophy BPK Goražde

	Close friends	Time spent with them
Activity duration	N (%)	N (%)
1-2	3 (21.4)	9 (64.3)
3-more	9 (64.3)	3 (21.4)
No friends	2 (14.3)	2 (14.3)
Total	**14 (100)**	**14 (100)**

There is no statistically significant difference in time spent with companions, friends: χ2 = 6.000; df = 2; p = .0498.

Of the 14 respondents from Gorazde 3 (21.4%) have one or two other friends, three or more friends have 9 (64.3%) of respondents, and without friends are 2 (14.3%) of respondents. Time spent with friends for one to two hours per day have 9 (64.3%) respondents, three and more hours per day 3 (21.4%) of respondents.

Table 21. Time spent with friends

	Close friends	Time spent with them
Activity duration	N (%)	N (%)
1-2	26 (21.5)	67 (55.4)
3-more	76 (62.8)	34 (28.1)
No friends	19 (15.7)	20 (16.5)
Total	**121 (100)**	**121 (100)**

There is a statistically significant difference in time spent with friends: χ2 = 34.137; df = 2; p < .0001.

Out of a total of 121 respondents, 26 (21.5%) have one or two friends, while three or more friends have 76 (62.8%) respondents. Without friends are 19 (15.7%) of respondents. Time spent with friends for one to two hours a day have 67 (55.4%), three or more hours daily with friends spend 34 (28.1%) of respondents. 20 (16.5%) of the respondents do not spend time with friends.

DISCUSSION

In the study by Mlinarević V. **Styles of Leisure Time of High School Pupils in Slavonija and Baranja**, 2004, 43 Leisure activities were listed. The author groups the styles of leisure time of the young in 4 styles: elite, hedonistic, sport-recreational and traditional-non-conventional (Mlinarević, 2004).

Passive relaxation is reflected in hedonistic content: consumers fun and parties in cafes, bistros and disco clubs, watching television and videos, listening to different types of music and contemporary communication. The research results show the high school students leisure time as active participation, creativity and self-realization in structured content and passivity in the consumers' and story leisure time space. The local and wider community is responsible for creating favorable material, spatial and human conditions and immediate help for young persons to formulate and quality structure of leisure time (Milanović, 2004).

Leisure time provides great opportunities for the creative and cultural development of a personality, and as a general social phenomenon does not know the age limits. The Leisure time should be performed satisfactorily with activities selected by the person. The Leisure time phenomenon, as a space for self-actualization and personalization, plays an important role in the maturing process and is an understandable interest in researching and improving this area of educational activity. Treatment in this area involves exploring interesting leisure activities and developing the skills of Leisure activities through participation in activities (Švraka & Salkić, 2016).

The leisure time of youth is a great time space. With its animation, content and forms, it is applicable and interpolated in the life of the youth. If it is insufficiently designed and lead, leisure time can become negative. It is therefore important to assist young persons in organizing and structuring leisure time, as well as involving young persons in creating programs. Take care of their real needs for fun, socializing, falling in love, but also for activities that involve challenges and require physical and mental effort (Mlinarević, 2004).

In clinical work with children with developmental difficulties, far greater progress has been made than was previously considered feasible. Although the individual potential is not unlimited, most children have a wide range of potential abilities. However, the way in which they develop depends largely on the type of experience involved (Stanley et al., 2003).

Children with developmental difficulties need assistance in developing options for leisure activities and adjusting the environment to perform leisure activities according to their capabilities. Treatment in this area involves exploring interesting leisure activities and developing the skills of leisure activities through participation in activities. Training activities are a simple and very useful method to achieve maximum autonomy and functionality of the child while also having fun activity.

There is nothing impinging on a child, a story is taught in the story and the game, so the activities listed below are part of the game, not the classic treatment. Children with developmental difficulties are more involved in leisure activities themselves or with their parents because they depend more on the help of their parents/guardians than their peers (Švraka & Avdić, 2012).

CONCLUSIONS

1. Relaxation activities:
- Of the total sample of 121 respondents one hour per day listen to music 29 (23.97%) of the respondents, 2 hours 26 (21.49%), 3 and more hours 59 (48.76%) of the respondents and 7 (5.78%) do not listen to music. There is a statistically significant difference in leisure time spent listening to the music and cities of the participants: $\chi 2 = 31.904$; df = 12; p = .0014.
- Of the total sample 37 (30.58%) of the respondents one hour per day, "do nothing", 2 hour "does nothing" 29 (23.97%), 3 and more hours per day 25 (20.66%) respondents, and all day/completely "do nothing" 30 (24.79%) of the respondents. There is a statistically significant difference in leisure time spent in inactivity towards the cities of the participants: $\chi 2 = 22.464$; df = 12; p = .0326.
- For 52 respondents of the Cerebral Palsy Association of Canton Sarajevo there is a statistically significant difference in the time spent in recreational activities: $\chi 2 = 43.470$; df = 6; p < .0001.
- There is no statistically significant difference in the time spent in activities that are used for relaxation for the respondents from the Center "Koraci nade" in Tuzla, the Dlan association from Zenica and the associations from Gorazde and Sapna. A small number of respondents are certainly affecting the test results.
- For all four Associations, members of the Cerebral palsy associations of FBiH and the Center "Koraci nade", Tuzla, for leisure activities for relaxation, there is a statistically significant difference in the time spent in these activities: $\chi 2 = 55.071$; df = 6; p < .0001

2. Activities for recreation and personality development:
- There are statistically significant differences in the frequency of participation in cultural-sports activities for 52 respondents of the Cerebral Palsy Association of Canton Sarajevo: $\chi 2 = 60.463$; df = 10; p < .0001.
- For 17 respondents of the Center "Koraci nade" from Tuzla there is a statistically significant difference in the frequency of participation in cultural-sports activities: $\chi 2 = 35.364$; df = 12; p = .0004.
- For 29 respondents from the Association Dlan in Zenica there is a statistically significant difference in the frequency of participation in cultural-sports activities: $\chi 2 = 43.250$; df = 12; p < .0001.
- There is no statistically significant difference in the frequency of participation in cultural-sports activities for associations from Sapna and Gorazde.
- TFor all four Associations, members of the Cerebral palsy associations of FBiH and the Center "Koraci nade", Tuzla, there is a statistically significant difference in the frequency of participation in cultural sports activities: $\chi 2 = 162.758$; df = 12; p < .0001.

3. Social interaction:
- There are statistically significant differences for 52 respondents of the Cerebral Palsy Association of Canton Sarajevo in the time spent with friends: $\chi 2 = 28.471$; df = 2; p < .0001.
- For 29 respondents from the Association Dlan from Zenica, there is a statistically significant difference in time spent with friends: $\chi 2 = 9.722$; df = 2; p = .0077.
- There is no statistically significant difference in the time spent with friends at the Center "Koraci nade", and associations from Gorazde and Sapna.
- For all four Associations, members of the Cerebral palsy associations of the Federation of Bosnia and Herzegovina and Center "Koraci nade", Tuzla, there is a statistically significant difference in time spent with friends: $\chi 2 = 34.137$; df = 2; p < .0001.

4. Inclusive policy should be represented in the curricula of all kindergartens, schools and faculties with planned leisure time activities.
An integral part of all therapeutic approaches to persons with developmental difficulties should be the training of persons with developmental difficulties and their families for the adequate use of leisure time. Working with parents/family through "family-oriented practice" is a challenge for occupational therapists and other professionals in health care services and requires a significant change from a traditional child-centered approach.

Systematic development of methodology of Leisure time research and interdisciplinary approach to this vital problem is needed.

Recommendations

- The time spent with television and the Internet for three or more hours a day is a large part of every day, which indicates inadequate, inadequate and inhumane leisure time, more so if persons are not engaged in school or work activities during the day. In this case, it is necessary to support not only the person with cerebral palsy but also its family to reduce the time spent with TV and the Internet for up to two hours a day.
- Improving the quality of life of persons with cerebral palsy and other difficulties by involving them to sports programs should be one of the priority tasks of families, experts, and associations of persons with cerebral palsy. True, everyone needs more support from the community. It is very important to subdue interests, stimulate curiosity, and support persons with difficulties that show interest in a specific hobby, because hobbyism should be understood as a space of self-actualization and personality achievement.
- Cultural activities for all - The fact that more than half of the persons surveyed do not go to the cinema and the theater points to the need to investigate the causes of this.
- Information on socializing with friends of respondents suggests good socialization and it can be concluded that the persons with cerebral palsy pays attention to friendship.
- It is necessary to allow persons with developmental difficulties the choice of leisure activities.

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INTERNALISED AND EXTERNALISED DISORDER FROM THE ASPECT OF FREE TIME

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ABSTRACT

A well-organized free time at children and youth can prevent or ease the occurence of serious behavioural disoders and ensure a quality use of free time. The aim of the research is to examine if a well-organized free time has impact on the occurence of internalised and externalised disorders. The research starts with the assumption that students whose free time is organized have less intensity of exposure of some types of internalised and externalised behavioural disorders. The sample consists of 230 primary and secondary school finishing class students, both sex, aged 14-19 years old. The research was conducted at the area of the city of Tuzla. The Scale of self assessment of the youth was used in the research. The results show that students who do not spend a well-organized free time expose the following types of internalised and externalised disorders: anxiety, somatic issues without a clear medical cause, violation of rules at home and school.
Key words*: internalised aaand externalised disorders, free time, adolescents.*

INTRODUCTION

Free time composes an imortant part of a child's life. It is the time that children spend after their obligations in a family and after school and other institutions. Fun and relaxation is the basic goal of free time. Besides this, free time offers a chance for a spontaneous learning in accordance to their own interests and motivation. Considering that children face an intensive period of socializing and that all impacts on them are on alert, it is crucial how they will spend their free time.

The way of spending free time is greatly subject to the impact of the environment and mass media to which children adapt easily and promptly due to its everyday presence from the early age (Miharija, Kuridža, 2010). Each free time activity consists of a developing, self actualizing and primary-preventive role. If the educational component of free time achieves educational benefits so the activities during free time became a need for self actualization of the youth's personality then the activities during free time fulfill both roles.

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However, when free time due to various subjective or objective reasons becomes a "ground" for boredom and "empty time" then its developing component becomes questionable and needs an urgent sociopedagogical intervention in order to prevent further disorder which will affect an individual and society (Pehlić, 2014). When it comes to the impact of behavioural disorder the unavoidable factor is free time of a young person, actually the content and the way the time is spent. In modern scientific literature free time is described as a space where different risks for emmergence and development of this issue can occur (Meščić-Blažević, 2007). Therefore, Previšić (2000) claims that the uprising of children and youth is actually endangered by a possible negative impact of free time. Young people very often do not know to organize their free time activities, they largely spend it without any goals or content. Such uncontrolled environment ussually results in getting under influence of an individual and groups who are asocial and with socially unacceptable behaviour. Having this in mind, free time can be some sort of "asocial bomb" and if not fulfilled with positive content and offers which provide a chance for a self –detection and a self-confirmation. Attitudes and behaviour of a young adolescent according to Mešić-Blažević (2007) are strongly affected by friends and groups of the same age, namely the more a person is insecure and liable to social conformity the more the impact and pressure is stronger. The author highlights that one of the most important risk factors for the occurence and development of behavioural disorder is if a youth spend time with persons with deliquent behaviour or near them. Constant negative proving and a fight for hierarchy lead to a deeper social decay. Dryfoos (1990) states that deliquency, violent behaviour, alcohol and drugs abuse, school leaving and risky sexual behaviour are all risky behaviours of children and youth. These all need a special social attention.

The occurence of internalised and externalised behavioural disorders is related to free time. Externalised behaviours include the following problems: attention, self-control, non-cooperation, asocial as well as agressive behaviours (Bornstein et al., 2010). Achenbach (1991) marks the externalised or so called active behavioural problems as insuficiently controlled and according to others directed behaviour. The author puts to this group subscales of deliquent behaviour and agressiveness-impulsiveness, hyperactivity, lack of atten-

tion, disobedience, confrontation, insubordination, negative behaviour, agressivenes, destructiveness and deliquency. The internalised disorders relate to: depressive moods, reticence, anxiety, the feeling of inferiority, shame, hypersensitivity and the feeling of somatic difficulties (Bornstein and assocs., 2010). According to Ashford and associates (2008) the internalised issues are interpersonal disorders such as depression, anxiety and excessive fear (Achenbach, Edelbrock, 1984) and they occur very often, till the age of sixteen, around 15 % of children experience emotional disorder (Costello et al., 2003).

A number of researches show the stability of internalised behavioural issues as well as a tendency of multiplying of the internalised symptoms (Maglica & Jerković, 2014). Bašić (2009) states how exactly the internalised behaviours such as reticence, instability, isolation, children without friends, and those who are prone to dreaming belong to a behavioural group with a prediction to last even in the later age.

The attitudes of Ashford and assocs. (2008) support the above stating that despite hight prevalences of internalised disorders during adolescence, the symptoms actually manifest much earlier and they are relatively stable from the early childhood all the way to adolescence (Costello et al., 2003) and adult age.

When it comes to a pedagogical prevention, according to Meščić-Blažević (2007) free time when consumed in a positive and socially acceptable manner represents a strong protective factor for a development of risky behaviours. It is crucial to develop a positive attitude towards spending free time (Previšić 2000), make children creative in order to develop a positive environment for their free time activities. Arranging some attractive extracurricular activities school can contribute a promotion of a quality implementation of free time. It is crucial when creating a programme to involve adolescents and take care of their real needs for fun and socialization (Meščić- Blažević, 2007).

According to Dizdarević (2002), when organizing free time a triple function of free time which has to be concipated and programmed in such a way that a young person during free time educates and upbrings but also recreates and relaxes needs to be taken into consideration. Also young people have to find initiative and confirmation for their own activity, otherwise one cannot expect them to do what is desirable or socially approved.

Socio-pedagogical and other interventions towards children and minors have to be based on findings that the behavioural disorders are at the same time social and personal phenomena on which a number of factors have impact such as social (economical, cultural, moral) but also individual (hereditary, psychological). Therefore, the suppression and prevention of a behavioural disorder in the modern environment needs a series of economical, social, health, educational and other interventions in order to remove or reduce the causes that lead a young person to an "unacceptable" behaviour. Actual preventive and treatment activities should, before all come from specific causes of such behaviour (Radetić- Paić, 2010).

The aim of the research and hypothesis

The aim of the research is to examine if a structural free time has impact on detection of some models of behavioural disorders or is there an impact on detecting the internalised or externalised disorders.

The research starts from the assumption that students who spend a structural free time have less intensity of detection of some types of internalised and externalised behavioural disorders.

METHODS

The sample of data subjects is consisted of 230 finishing grade students from both secondary and high school, both sex, age 14-19. The research was conducted in the area of the city of Tuzla. The sample includes finishing grade students both secondary and high school, 78 (33,9%) of secondary school finishing grade students and 152 (66,1%) of high school finishing grade students. As far for the sex, the structure of the data subjects is as follows, 84 (36,5%) male students and 146 (63,5%) of female students of the finishing classes.

The sample structure of the data subjects, secondary and high school finishing classes from the aspect of their grades: 108 (44,3%) final grade 5, 100(43,5%) final grade 4, 27 (11,7%) of students whose final grade was 3 in the previous class year and only one student (0,4%) whose final grade was 2. As far for the conduct, even 209 (90,9%) of students are exemplary, 18 (7,8%) are very good, 2 (0,9%) are good and 1 (0,4%) student is satisfactory.

The Youth Self–Report Scale (YSR-Achenbach and Rescorla, 2001) was used in the research. This scale examines a child's internalised and externalised issues. One part of the instrument contains 112 particles whic make 8 syndromes scales: reticence, anxiety/depression, physical dissabilities, social issues, opinion issues, attention issues, breaking the rules (deliquent conduct), agressive behaviour and one prosocial subscale. These syndrom scales are then divided into the internalised, externalised as well to added problem groups, whereas a part of the particles as mentioned relates to prosocial subscale.

The SPSS 22.0 operating system for Microsoft Word was used to process the data. Statistic significance is being tolerated for $p \leq 0,05$. The analysis needed for the research is Mann Whitney test.

RESULTS OF RESEARCH AND DISCUSSION

Table 1 . Mann Whitney test for the internalised behavioural disorders from the aspect of structural free time spending

Variables				Free time spending				Mann Whitney test	*p*
				structured		nonstructured			
				N	M Rang	N	M Rang		
INTERNALISED BEHAVIOURAL DISORDERS	anxiety/ depression		Cry a lot.	103	115.56	127	115.45	6534.00	.988
			Afraid of some animals, situations, or places except school.	103	122.34	127	109.95	5835.50	.110
			Afraid to go to school.	103	106.07	127	123.15	5569.50	.020
			Afraid to think or do something bad.	103	107.95	127	121.63	5762.50	.082
			I think I must be perfect.	103	118.43	127	113.12	6238.50	.516
			I think nobody loves me.	103	104.92	127	124.08	5450.50	.011
			I feel worthless or less valuable.	103	108.77	127	120.96	5847.00	.089
			I am nervous or tense.	103	107.01	127	122.39	5666.00	.062
			I am too scary or angst.	103	114.31	127	116.46	6418.00	.784
			I feel too much guilt.	103	108.39	127	121.26	5808.50	.078
			I feel confused or distressed.	103	107.78	127	121.76	5745.00	.064
			I am considering a suicide.	103	112.50	127	117.93	6231.50	.360
			I worry a lot.	103	113.28	127	117.30	6312.00	.626
	Reticence/depression		I enjoy not so many things.	103	106.74	127	122.61	5638.00	.056
			I would rather be alone than with other people.	103	115.34	127	115.63	6524.00	.971
			I refuse to speak.	103	109.69	127	120.21	5942.50	.124
			I am mysterious or keep it for myself.	103	114.04	127	116.68	6390.50	.748
			I am too shy or scary.	103	117.80	127	113.64	6304.00	.582
			I have no energy.	103	102.28	127	126.22	5178.50	.003
			I am unhappy, sad or depressed.	103	106.37	127	122.91	5600.00	.029
			I intend not to engage with others.	103	109.29	127	120.54	5901.00	.168
	Somatic difficulties		I have nightmares.	103	111.43	127	118.80	6121.00	.329
			I feel vertigo or dizziness.	103	112.32	127	118.08	6212.50	.404
			I feel too tired without a reasonable cause.	103	107.99	127	121.59	5767.00	.094
		Physical without reasonable medical causes	health problems or pain (not headaches or stomachache)	103	114.40	127	116.39	6427.50	.748
			headaches	103	117.85	127	113.59	6298.50	.598
			nausie, weakness	103	108.07	127	121.52	5775.50	.062
			eyes problems (neons corrected by wearing glasses)	103	110.67	127	119.42	6043.00	.112
			rash or other skin problems	103	109.62	127	120.27	5935.00	.045
			stomachache	103	123.29	127	109.19	5738.50	.059
			vomiting	103	112.78	127	117.71	6260.00	.386

While analysing the differences in exposing the internalised behavioural disorders in terms of anxiety/depression from the aspect of structural freetime spending.It has been found that finishing grade secondary and high school students statisticaly have a high difference at the level of p≤0,05, for the following:
Students without a structural free time are more afraid to go to school in relation to students with a structural free time and students with nonstructural free time often feel like nobody loves them in relation to students with a structural free time. The manifestation of somatic difficulties, that are one of the subscales of the internalised behavioural disorders from the aspect of structural free time for the finishing secondary and high school grade students, statisticaly a significant difference at the level of p ≤ .05, show for the following: Students without a structural free time express more like body problems without a reasonable medical cause in terms of a rash or other skin problems in relation to students with a structural free time.

Table 2. Mann Whitney test for the externalised behavioural disorders from the aspect of structural free time spending

Variables		Free time spending				Mann Whitney test	P
		structured		nonstructured			
		N	M Rang	N	M Rang		
EXTERNALISED BEHAVIOURAL DISORDERS / **Breaking rules- deliquelt behaviour**	I drink alcohol.	103	100.88	127	127.36	5034.50	.001
	I do not feel guilty after I do something I should not do.	103	109.47	127	120.39	5919.50	.158
	I break rules at home, school and other places.	103	108.03	127	121.56	5771.50	.047
	I spend time with children who end up in trouble.	103	109.80	127	120.12	5953.50	.142
	I lie or cheat.	103	105.07	127	123.96	5466.50	.004
	I would rather spend time with children older than me than with those of my age.	103	117.62	127	113.78	6322.00	.640
	I run away from home.	103	108.10	127	121.50	5778.50	.004
	I like to burnthings.	103	114.06	127	116.67	6392.50	.672
	I steal at home.	103	115.16	127	115.78	6505.50	.856
	I steal outside my home.	103	113.51	127	117.11	6336.00	.308
	I swear and use bad words.	103	105.02	127	124.00	5461.50	.020
	I think oo much of sex.	103	123.05	127	109.38	5763.00	.085
	I use tobacco.	103	101.51	127	126.85	5099.50	.001
	I do not attend classes or school at all.	103	104.22	127	124.65	5378.50	.001
	I use drugs.	103	112.00	127	118.34	6180.00	.213
Agressive behaviour	I fight a lot.	103	102.92	127	125.70	5244.50	.005
	I am evil to others.	103	109.48	127	120.38	5920.50	.112
	I look for a lot of attention.	103	111.24	127	118.95	6102.00	.337
	I destroy my personal things.	103	105.78	127	123.38	5539.50	.004
	I destroy others' things.	103	107.18	127	122.24	5684.00	.001
	I disobey my parents.	103	95.12	127	132.03	4441.00	.000
	I disobey at school.	103	97.27	127	130.29	4662.50	.000
	I often take part in fights.	103	105.98	127	123.22	5560.00	.002
	I attack people physicaly.	103	108.78	127	120.95	5848.00	.011
	I often scream.	103	108.80	127	120.94	5850.00	.081
	I am stubborn.	103	122.53	127	109.80	5816.00	.117
	I often have sudden mood or feeling swich.	103	117.42	127	113.94	6342.50	.674
	I am doubtfull.	103	108.10	127	121.50	5778.50	.098
	I often tease others.	103	104.59	127	124.35	5416.50	.007
	I get mad easily.	103	111.50	127	118.75	6128.00	.378
	I threat others to hurt them.	103	111.72	127	118.56	6151.50	.244
	I am louder than the rest of the children.	103	110.89	127	119.24	6065.50	.289

While analysing the differences in exposing the externalised behavioural disorders in terms of breaking rules- delinquent behaviour from the aspect of structural free time spending.It has been found that finishing grade secondary and high school students statisticaly have a high difference at the level of p ≤0,05, for the following:students with nonstructural free time often consume alcohol in relation to students with structural free time, students with nonstructured free time often break rules at home, school and other places compared to students whose free time is structured, students whose free time is not organised often lie or cheat than those whose leisure time is well organised, students with nonstructured free time often run from home compared to those whose free time is structured, students whose leisure time is not organised often have problems such as missing their classes or not coming to school at all compared to students whose free time is well organised.

Table 3. Mann Whitney test for additional behavioural disorders from the aspect of structural free time

	Variables	Free time consumation				Mann Whitney test	p
		structural		nonstructural			
		N	M Rang	N	M Rang		
Social problems	I depend too much on others.	103	115.71	127	115.33	6518.50	.960
	I feel lonely.	103	105.57	127	123.55	5518.00	.023
	I disagree with other children.	103	104.47	127	124.45	5404.00	.011
	I am jelaous.	103	118.93	127	112.72	6187.50	.442
	I feel that others are bothering me.	103	116.00	127	115.09	6489.00	.884
	I often accidentaly hurt myself.	103	119.46	127	112.29	6132.50	.326
	They often tease me.	103	105.73	127	123.43	5534.00	.011
	Other children do not love me.	103	112.71	127	117.76	6253.50	.473
	My coordination is weak or I am clumsy.	103	108.75	127	120.98	5845.00	.099
	I would rather be with younger children than with those of my age.	103	109.47	127	120.39	5919.50	.106
	I have speech problem.	103	116.99	127	114.29	6387.00	.606
Attention problems	I behave childish for my age.	103	106.71	127	122.63	5635.50	.042
	I do not finish what I start.	103	94.30	127	132.69	4357.00	.000
	I hardly focus or pay attention.	103	97.71	127	129.93	4708.00	.000
	I cannot sit calmly.	103	102.96	127	125.67	5248.50	.005
	I feel confused or in fog.	103	102.77	127	125.83	5229.00	.003
	I dream a lot.	103	109.49	127	120.37	5921.50	.187
	I overreact.	103	107.86	127	121.70	5753.50	.080
	My grades are bad.	103	106.42	127	122.86	5605.50	.012
	I hardly focus or easily loose focus.	103	105.25	127	123.81	5484.50	.022
Opinion problems	I cannot free myself from some thoughts;obsession.	103	106.59	127	122.73	5622.50	.047
	I intentionally hurt myself.	103	110.84	127	119.28	6060.50	.102
	I hear noises or voices that others think they do not exist.	103	114.08	127	116.65	6394.50	.671
	I have uncontrollable moves.	103	107.48	127	122.00	5714.50	.040
	I stab my skin and other parts of my body.	103	113.98	127	116.73	6384.00	.513
	I constantly repeat some actions.	103	109.23	127	120.59	5894.50	.090
	I see things that others think they do not exist.	103	116.94	127	114.33	6392.50	.648
	I sleep less than most of the children.	103	117.54	127	113.85	6330.50	.647
	I pile things that I do not need.	103	114.28	127	116.49	6414.50	.775
	I do things that others consider to be weard.	103	107.50	127	121.99	5716.50	.059
	Others think my thoughts are weard.	103	108.26	127	121.37	5795.00	.094
	I have difficulties with my sleep.	103	117.21	127	114.11	6364.00	.689

(Left margin label spanning table: ADDITIONAL BEHAVIOURAL DISORDERS)

When it comes to additional behavioural issues in the sense of social issues, statistically significant differences at the level of p ≤ .05 are established the way that finishing grade students of both secondary and high school more often expose some social issues depending on the structure of their free time. The above mentioned issues are the following ones:

-students whose free time is nonstructured often feel lonely in relation to students who have a structured free time

-students without organised free time often disagree with other children in relation to students who have an organised free time and

-students whose free time is nonstructured often tease others than students whose free time is structured.

It is a pure fact that children and youth spend most of their time in class, at home,in caffe bars, sitting in front of a TV or computer therefore it is not a surprise that some of a typical behaviours of secondry and high school children are irritability, nervousness, agessiveness, focus issues and fast tiring. Traditionally, schools are places where knowledge is acquired frontally without promoting experience knowledge, personal activity and own value reckoning apart from external motivation by the evaluation of transfered or reproduced knowledge.

As a result there are more unacceptable and socialy undesired forms of behaviour of secondary and high school children, such as retreat, depression, bullying, violence, the use of psychoactive substances and stimulants. (Marković, Arsić, 2005). The free time activities of children with a behavioural disorders are disorganised. Socio-economic position of parents, their lack of care, poor initiative often bring such young persons in a state of boredom which they try to break by a deliquent behaviour (Lebedina-Manzoni, 2010). The perception of the free time in the modern society is a presumption for the understanding of its content and impact on the development of children and youth. Assuming that in the near future some free time quantity and quality changes might happen, an active participation in its creation and consumption is necessaryas well as a preparation of young generations for new experiences in this field in order to develop a positive free time habits (Valjan-Vukić, 2013).

CONCLUSION

After reading the paper, one can see that the theme of this research is actually an important and complex social issue. If it is desirable that our children and youth spend their leisure time in a socialy acceptable way then it would be crucial that leisure time should include activities like relaxation, personal development and entertiment. Therefore, if children and youth's free time had been filled with various socially acceptable activities there would have been more chance for them to acquire social skills such as the ability to make good relations, cooperations ability, conflict management and settlement skills. If children and youth's free time is structural, heavy behavioural disorders could be prevented or alleviated but also a better free time consumption for children to adapt social skills useful in their everyday life would be ensured. Leisure time supervision would not only prevent the occurence or a development of a behavioural disorder at children and youth, it will also have a positive impact on society. It is a fact that children and youth are the future makers of society, therefore it depends on their choices.

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THE FREQUENCY OF USAGE OF DIFFERENT WORK FORMS IN AN INCLUSIVE TEACHING ENVIRONMENT

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ABSTRACT

The aim of this study was to investigate how frequently the different forms of work (frontal, individual and group) are used in the Serbian inclusive education. The sample consisted of 16 elementary schools in Serbia which pupils with sensory impairments attend (visual and auditory impairments: N=69). Systematic observation has been used on 382 classes. Results have shown that in the majority of classes the frontal form was predominantly used (67.7%). Significantly less present was the individual form (22.6%), while the variations of group work were the least frequently used. Considering the goals of inclusive education with the fact that the social engagement of pupils with sensory impairments in class can be beneficial, the frontal form alone is not enough for an effective teaching process. Despite its practicality, it is necessary to use the frontal form in balance with other work forms in all the phases of the class.

Keywords: frontal work form, group work form, inclusion, individual work form, pupils with sensory impairments, work forms of teaching

INTRODUCTION

Forms of teaching represent basic didactic strategies that enable learning while being based on a communication structure between teacher and pupils (Pranjić, 2005). Despite their numerous classifications (Meyer, 2002), within Serbian didactic literature they are organized around the number of pupils involved during class. In relation to this criterion, we can distinguish between frontal, individual and group form (which includes teamwork and working in pairs). The frontal form (teacher's presentation) has risen in significance since the implementation of Comenius's school system into mass education, be-

cause it was in accordance with education goals at the time (Sadler, 2014). However, this traditional approach to teaching that still predominantly relies on this form is criticized for being unable to answer the demands of the modern age. In education today, the focus is transferred onto functional knowledge, rather than a purely theoretical one. Meeting these modern educational demands, the work distribution and organization of the class is essential (in terms of the activity carrier). The usage of various teaching forms has many important consequences on the learning process and its outcome, as well as the overall communication in the classroom (teacher-student and peer relations).

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Their adjusted and balanced combination is also highly relevant in the inclusive environment that gravitates around the equal involvement of every child in the learning process, regardless of their impairments or disabilities. For pupils with sensory and other impairments, it is important to ensure and organize a teaching climate that produces a feeling of belonging and equality, stimulating them to fulfill their potentials and move the boundaries of their limitations. To put an idea of inclusion into practice, implementing different forms of work plays a fundamental role because they move the emphasis to the number of acters and their interaction, simulating life beyond school walls. This means that communication and understanding, in their basis, must be adjusted to every type of impairment. Pupils with impairments should be provided with a number of preconditions of a complex support, ranging from the design of special plans and programs, using different teaching tools, prompts and technology, to the adequate evaluation of proficiency (Mitchell, 2008). If pupils with impairments are not provided with a proper way of following the class (which is, in part, enabled by the diverse work forms), they can significantly fall behind. This can negatively reflect on their motivation, sociability, self-efficiency and finally, on the effectiveness of the inclusive education itself. In short, the education of pupils with sensory impairments should be directed towards the optimal development of their personality and potentials (Hrnjica, 1997).

As mentioned above, the frontal form of teaching relates to the teachers' presentation that pupils listen to, watch and remember (Ruić, 2006; Radović, 2005) and it is dominant in Serbian pedagogical practice (Markić, 2014; Buljubašić Kuzmanović & Petrović, 2014). This form is used to introduce new or summarize old material, as well as for detailed explanation and description of drawn conclusion or facts. If the quality of teaching is to be obtained using this form, several conditions must be met. Teacher's diction should be clear, his voice loud enough and the speech understandable and appropriate to the age of the pupil group. This especially holds when a pupil with a hearing impairments attends class, taking into account the risk of misunderstanding or dropping back. Further, it is useful if the teacher gives his own opinion about the subject, uses different demonstration techniques and constantly encourages the curiosity of pupils (Bognar & Kragulj, 2010). Further advantages of this form concern time efficiency and the control the teacher has over the classroom during work. Implemented correctly, it can prove very efficient (Bligh, 1998). However, the nature of the frontal form is such that it implies a unidirectional teacher-student relation (Terhart, 2001), thereby ignoring the social nature of learning (Rowland, 1987). If it is overused, it can put a limit on the communication in the classroom. Additionally, the frontal form is designed for an "average" student, which is not conducive to the heterogeneous structure of an inclusive classroom. Based on the aforementioned, negative consequences of the asymmetric use of the frontal form are the rigidity and lack of flexibility of the teaching process, distancing students among themselves and the teacher. In the course of conductive inclusive teaching, the frontal form shows considerable limitations. Within its scope, pupils with impairments can have fewer opportunities for socializing and collaborative learning, can linger on through certain topics, have trouble understanding or ultimately, without assistance or adapted teaching, remain unable to fully follow the class work.

Contrary to the frontal form, group form allows for direct interaction to occur (i.e. horizontal and vertical, two-way communication) by dividing pupils in work groups of various sizes. While the groups of a couple of pupils are customary, group form has many variations within itself, mainly teamwork and working in pairs. In teamwork, pupils embrace a common goal that, in order to be completed, needs the full cooperation of every member and the coordination of available materials and time. The roles assigned to each pupil are somewhat different, but tightly connected, allowing everyone to contribute to the work process, despite the fact that usually one pupil has the lead role. In working in pairs, pupils collaborate and adapt to one another while working on the shared goal. They directly become familiarized with the other's strengths and weaknesses and use them as resources, thus strengthening the relationship. This work sub-form can serve as a preparation for group work involving more children (Mattes, 2007). As such, it gives a notable insight into a peer's mind that is more or less different. For pupils with sensory impairments, working in pairs can serve against prejudice and in favor of social inclusion. Therefore, the collaborative nature of group work has a strong positive influence on peer relations, as well the process and the outcome of learning. Through the conception of common goals, cognitive processes are activated while the pupil gets pushed into diverse practical activities. In return, a more firm knowledge is constructed.

There is a tremendous body of research that proves this and many other benefits of the group work form, among which only few are specified here: pupils become more independent, responsible, creative and self-confident (Dean, 2000); they learn to respect individual differences, which can lead to greater empathy, fruition of friendships (Gödek, 2004; Gerard & Miller, 1976), and positive attitudes towards social heterogeneity (Johnson et al., 1976); they quickly and more efficiently establish knowledge and skills (Slavin, 1987), in which social skills stand out as most improved (Hallam, Ireson & Davies, 2013). Obviously, a number of inclusion requests can be answered through the appropriate usage of the group form, which has more social ''success'' than any other form. All of its variations encourage social and intellectual skills highly applicable to the present and future everyday life. However, in working with certain materials it is best replaced by other forms. These are the materials too demanding or abstract, and those who require a certain training first. Even the very dynamics of the group can lead to a halt when, for instance, the less competent pupils rely too much on the more competent, or when some pupils express very high sensitivity. Nevertheless, the richness of communication that group work possesses can have a positive influence on the motivation, success and the social participation of pupils with sensory impairments. Even outside the educational system, these (developed) skills and abilities can, in the long-term, potentiate success and satisfaction in other aspects of life. As the school, being a type of preparation for the community and a small community within itself, uses the essential components of adaptation, in its basic element (the class), they must be organized in a way that enables pupils with sensory impairments to leave the system of schooling as self-confident, accepted, active members of the society.

Individual form refers to the pupil's independent work on specific classroom assignments. It allows pupils to work with the speed they are comfortable with and distribute the energy and time needed for completion autonomously. Most commonly, it is used in lesson revision, application of knowledge on different problems, in constructing individual projects and working on the computer. It also serves as a replacement for tasks unsuitable for group work, and as a preparation for the test-situation (Buljubašić Kuzmanović & Petrović, 2014). Pupils advantages cover the advancement of organizational skills, critical thinking, knowledge application and gaining responsibility (Meyer et al., 2008). They become capable of adequate auto-evaluation (Kyriacou, 2009). In using the individual form, it is necessary to adapt the type of a task and its complexity to the pupil, which in the context of inclusive education can include some transformations (in terms of used materials, helping tools, additional teacher's help). Hence, pupils with sensory impairments and their progress needs more attention, motivation maintenance and determination of the stable evaluation standard. Nurturing their self-efficacy is crucial, which is accomplished with patient and solid pedagogical practice. However, in tracing the work of every individual pupil, time-management can become an issue if the teacher were to spend more time on some pupils and less on others (Galton & Williamson, 1992). The prevention of this asymmetry can be achieved with giving sufficient support, and with directing pupils to additional help after class, for instance. But the biggest objection to this form remains the lack of social interaction. Even though pupils learn and develop different skills on their own, the communication and perspective sharing with others is of immeasurable value. Social relations are the central component of a knowledge that is functional.

When it comes to applying the described forms in class, the teacher should bear in mind that they require prudence and even certain artistry. That means that the usage of teaching forms goes way beyond the simple placement of a pupil with sensory impairments in a group or a team, or giving them individual work for the sake of the individual form itself being fulfilled. If the teaching is to be efficient, the teacher should coordinate all possible forms and use them in an approximately equal amount. Besides their described individual positive effects, it is their diversity that influences many other aspects of the didactic culture of the school (Kolak, 2012). Organizing classes so that pupils can feel integrated in the community that designs the best environment for them to learn is an essential quality of inclusive teaching. In that way, pupils with sensory impairments are preparing for the professional and social interaction in the community (Alper & Ryndak, 1992).

This research aims to gain a realistical insight into the presence of frontal, individual and group work form in the inclusive teaching in Serbia, using the frequency of usage and their duration in class as measures. Along with their strenghts and weaknesses, the present research tends to provide relevant indications for improvement by comparing the frequency of different work forms usage.

Following the class while only partly relying on the senses can potentially threaten the socialization, independence and success of these pupils; with the investigation of diversity of work forms used in an inclusive environment, this research indirectly tends to point to the relevance of combining them in class, in terms of prevention. So far, the research that included pupils with sensory impairments (in more or less similar research topics) remains scarce. The change this research makes by including the whole category of sensory impairments and exploring different forms of work used while working with them can make a contribution to a better quality of Serbian teaching practice.

MATERIALS AND METHOD

Sample

The sample consisted of 16 elementary schools in the Republic of Serbia, which are attended by pupils with sensory impairments. The choice of schools was made according to available information on the overall number of pupils with sensory impairments. Research was conducted using the technique of systematic observation which covered 382 school classes. Within these observations, there were 200 observations of the sixth grades and 182 observations of the seventh grades (Table 1).

Table 1. Observations per grade

Grade	f	%
Sixth	200	52.4
Seventh	182	47.6
Total	382	100.0

The sample of pupils with sensory impairments (N=69) cosisted of blind (7,2%), low vision (50,7%), deaf (17,4%) and partially deaf (24,6%) pupils. The structure of the sample according to the type of impairments is presented in Table 2.

Table 2. Type of impairments

Type of impairments	f	%
Blind	5	7.2
Low vision	35	50.7
Deaf	12	17.4
Partially deaf	17	24.6
Total	69	100.0

Research technique

Systematic observation has been used, which falls into the category of descriptive methods. It was carried out through the protocol of teaching process recording and it consists of different guidelines for following and describing the adaptability and organization of the classroom, and forms of communication between pupils and teachers. This technique was chosen because it was assessed as appropriate for the given research goal. Systematic observation provided a direct examination of the teaching process that was strictly limited to forms of work (frequency and duration). In other words, it gave useful insight into the subject of research. The observation unit was the whole class, separated into introduction, central and final part of the class. For the given subject, the usage of descriptive statistics were appropriate (frequencies, percentiles, measures of central tendency and dispersion).

RESULTS

The results show that, looking at the class as a whole, the frontal form is predominantly used. Individual form is the next most often used form, and teamwork and group work follow. Working in pairs is the least used form. The results are presented in Table 3. As it can be seen, on the two-thirds of observed classes the frontal form is most commonly used. Other forms are used in significantly less degree. Looking at the introductory part of the class, the frontal form is predominant again. Despite that, the individual form, that comes second by frequency, takes more time. Frontal form and teamwork follow, while the group work has the shortest duration. Working in pairs was not used in this part of the class. Conclusively, teachers have consistently chosen to use the frontal form as the introduction to class subject.

Table 3. The frequency of teaching form usage - general information[2]

Dominant teaching form	f	%
Frontal	776	67.7
Individual	259	22.6
Teamwork	77	6.7
Group	19	1.7
Working in pairs	15	1.3
Total	1146	100.0

The frequency of introductory teaching forms is presented in Table 4, and their duration is shown in Table 5. In the central part of the class, the frontal form was still used most often, but the frequency of individual form use has increased, being almost equal with the frontal form in terms of frequency. Teamwork and group form have been rarely practiced, while working in pairs was the least used. In this part of class, all forms had similar duration. However, the individual form lasted the longest. Working in pairs lasted somewhat shortly, following the frontal form and teamwork, while the group form had the shortest duration.

Table 4. The frequency of teaching form usage – introductory part

Dominant teaching form	f	%
Frontal	329	86.1
Individual	37	9.7
Teamwork	15	3.9
Group	1	.3
Total	382	100.0

Table 5. The duration of teaching forms in the introductory part of class

Duration of teaching forms	Min	Max	M	SD
Frontal	1.00	32.00	7.32	3.89
Individual	2.00	45.00	7.77	9.04
Group	2.00	2.00	2.00	.00
Teamwork	2.00	10.00	6.67	2.99

The data on the frequency of usage is not significantly different from the introductory part, and they have been presented in Table 6.

Table 6. The frequency of teaching form usage – central part

Dominant teaching form	f	%
Frontal	175	45.8
Individual	164	42.9
Teamwork	34	8.9
Group	6	1.6
Working in pairs	3	.8
Total	382	100.0

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[2]The total number of observation refers to the observations of introductory, central and final parts of class taken together.

Table 7 shows the duration of teaching forms in the central part of the class. Lastly, in the final part of the class the frontal form is predominantly used. The individual form comes after, but in a notably less extent. All of the group forms are present in a negligible small degree. Frontal form also has the longest duration range, which potentially indicates its practical and easy application when the control of the available time is in the teacher's hands.

Table 7. The duration of teaching forms in the central part of class

Duration of teaching forms	Min	Max	M	SD
Frontal	2.00	45.00	18.66	10.10
Individual	2.00	45.00	19.98	11.08
Group	5.00	30.00	14.08	7.60
Working in pairs	5.00	30.00	19.33	9.30
Teamwork	3.00	35.00	17.64	9.58

The frequency of teaching forms is shown in Table 8, and their duration in Table 9. Conclusively, despite the fact that group form is used more frequently in the final part of class, the teachers still do not experiment with other forms of work sufficiently.

Table 8. The frequency of teaching form usage – final part

Dominant teaching form	f	%
Frontal	272	71.2
Individual	58	15.2
Teamwork	28	7.3
Group	12	3.1
Working in pairs	12	3.1
Total	382	100.0

Table 9. The duration of teaching forms in the final part of class

Duration of teaching forms	Min	Max	M	SD
Frontal	2.00	25.00	5.68	3.10
Individual	2.00	15.00	6.42	4.18
Group	10.00	15.00	12.50	3.54
Working in pairs	5.00	10.00	7.50	3.54
Teamwork	2.00	10.00	4.90	2.02

DISCUSSION

This study investigated the frequency of usage of different teaching forms in an inclusive practice, with an emphasis on the pupils with sensory impairments. Since the teaching forms are a common research subject, recognized as an element of a good inclusive practice, the goal was to indirectly measure this element by looking at the frequency of their usage in Serbian elementary schools. Results have shown that the frontal form is predominantly used, with a wide duration range in a single class. This is the case when we look at the class as a whole, and when we separate it on its introductory, central and the final part. The next most commonly used form (in all observation units) is the individual form, which in the central part of the class becomes used almost as often as the frontal form. Group form and its variations (teamwork and working in pairs) are the ones convincingly used the least. In terms of the dominance of the frontal form, Serbian schools do not differ from other countries on the account of the literature reviewed. The main finding here is also the subject of traditional class organization critique which accents the activity of the teacher, and it is based on the proved benefits of using group form(s) and the existence of numerous practical guidelines for its usage in classroom with or without pupils with impairments (Gödek 2004; Galton & Williamson, 1992).

Though the frontal form can be practical in terms of time-management and teacher's control, in the light of inclusion and the data on its overusage, it fails to answer new educational demands, mainly being the equal participation of each and every pupil in the construction of knowledge. In the introduction of this article strengths and weaknesses of each work form were presented, as well as the situations in which their application is appropriate. We have also put an emphasis on the positive effects of their combined use, mainly on peer relations, classroom climate and knowledge acquisition. Pupils with sensory impairments are most commonly exposed to the form that relies on perception and memory that does not allow for a lot of interaction and the activation of higher cognitive processes. This can negatively influence their subjective wellbeing (Keilmann, Limberger & Mann, 2007). The weaknesses of the frotnal form can be mitigated with the appropriate usage of other forms and this is what the teachers should be informed about and encouraged to do. With such an implementation, they would not only advance their teaching skills, but provide all pupils with an experience of learning that is functional and life-long.

There are few limitations to present research. Not all the schools and grades were included in the sample, so the examples of extraordinary practice may be overlooked. In a way, that is the limit of descriptive methods and statistics themselves, which are used here exclusively. Registering frequency and duration is informative, but it can exclude other important factors that determine all aspects of usage of a certain work form. This should be kept in mind while judging the indicators of quality of an educational system. Further, the data on the effect that different forms of work have on the pupils with sensory impairments is not explicitly stated. The reason for this is the lack of literarure on such a specific topic, even though there are many manuals for working with this children in Serbia and other countries (Lazor, Marković i Nikolić, 2008; Suzić, 2008; Orleove, Sobsey i Silberman 2004).

Future research could investigate the quality of the frontal form in schools in more detail, e.g. does it meet the requirements of efficiency (see Bognar i Kragulj, 2010). Because it is predominantly used, a qualitative study of its use could suggest new and more concrete guidelines for teachers. This applies to other work forms as well and can be explored longitudinally, possibly connecting work forms with schools success and other psychological correlates (e.g. academic self-efficacy). Research could also focus on the pupils, their satisfaction with work in class, their needs or the particularities of the communication between them and the teachers.

CONCLUSION

This research has pointed to the problematic area of a basic element of education: the process of learning. In the given educational setting, learning can be realized in many different ways and forms of work are only one of them. These findings can serve for an improvement of the pedagogical strategy in the inclusive environment that respects the principles of diversity, balance and adaptation to individual differences. The social nature of learning and the relevance of its enablement for the pupils with sensory impairments needs to be fully understood so that the idea of inclusion would in practice be really possible. The center of the idea of inclusion is a focus on the learning subject (Lewis & Norwich, 2005) and by overusing the frontal form of work in which an individual in essentially isolated, the realization of this idea becomes more difficult. However, the findings presented here should be taken as the current state of conditions on account of which changes are not only preferable, but possible.

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CONTENT ANALYSIS OF THE WRITTEN COMMUNICATION FORM OF DEAF CHILDREN

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ABSTRACT

The aim of this research was to examine the communication and linguistic competence of a meaningful understanding of the written communication form of deaf persons. In this study, a qualitative method of content analysis was used. The study was done on a sample of 70 deaf respondents. Deaf subjects were divided into two groups. One group wrote letters to another group on a topic of free choice, and the other group responded to the letter. After these correspondences, the letters were analysed in a way to search for understanding the content. Letters were agrammatic with a large number of omitted letters and syntactically difficult to understand. However, children who are deaf, perfectly recognized the context, and responded to letters with understanding. The results of the research showed that the deaf respondents have communication, but not linguistic competence in the written form of communication.
Keywords: deafness, linguistic competence, communication competence, letter.

INTRODUCTION

Hearing impairment, as a form of sensory impairment, causes multiple consequences in the overall development of the child and can be reflected in cognitive, emotional and social development and communication (Švraka, Salkić et al., 2016). Communication is shaped by language, and language emerges as a result of linguistic experience, exposure to spoken or sign language and innate abilities to adopt certain types of language forms (Coppola and Newport, 2005). Adoption of language and the formation of language competence arises exclusively in the conditions of active voice communication, which enables the understanding and use of numerous speech-language constructions, i.e. operations with meaningful language units, phonemes, morphemes, words and sentences (Luria, 2000). "Speech is very important in human development" (Hasanbegović, 2012).

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Language competence or linguistic knowledge implies knowledge of language system units at all levels: phonological, morphological, lexical, syntactic, semantic and textual, and knowledge of the rules for combining language units and their organization in higher order units (Jelaska, 2007). Language competence can be linguistic and communicational. Linguistic competence implies language knowledge (Chomsky, 1979). Communication competence is the ability of the speaker to choose between the various language subsystems the one that is most suitable for him or the use of language in everyday communication situations (Hasanbegovic & Kovacevic, 2014). Practical application of these competencies refers to the teaching of grammar, listening, speaking, reading, writing and creative expression. Linguistic competence includes theoretical knowledge of language, and communication competence includes practical knowledge of language, that is, the practical use of theoretical knowledge (Aladrović, 2007). "People with hearing disorders make a very heterogeneous population" (Hasanbegović, Beha & Mahmutović, 2013). The problem of children with preglingual hearing impairment is not primarily in the articulation and vocal elements of speech, but in the linguistic elements and in the meanings of the word. Problems arise with the use of dictionaries, meaning of words, grammatical rules, syntax, reading, writing, difficulties in word memory, speech comprehension or in expression (Hasanbegović & Mahmutović 2004). Children with hearing impairment produce short sentences of simpler syntactic structures than their own peers, have a poor vocabulary, demonstrate lexical rigidity, problems with the use of substitutes, show problems in the lexical, morphological, syntactic, pragmatic aspect of written speech, and the most prominent problems in the field of morphology (Yoshinaga-Itano & Downey, 1992). Deaf people due to hearing loss are not able to spontaneously learn oral-voice speech and language (Švraka, Salkić et al., 2018). "Children who are deaf can have their speech and language disorders rehabilitated" (Hasanbegović & Mahmutović, 2014). Most reading difficulties of deaf children are due to the fact that they are using a written language that they have not yet mastered verbally. The reason for the difficulty in reading is a significant lack of environmental information that is crucial for the interpretation of the text, because reading combines what is on the paper with previous knowledge, and if it does not exist then it is difficult to establish this type of connection (Rodriguez, 2007). People with hearing impairment show difficulties and challenges in learning effective and fluent writing (Kimberly, 2007). About 50% of young deaf people after finishing high school are reading and writing worse than a ten year old hearing child (Traxler, 2000). The writing of deaf people is characterized by the use of short sentences, several subordinated sentences, and several independent fused sentences with simple verbal forms (Yoshinaga-Itano, Snyder & Mayberry, 1996). Deaf children encounter the written information they need in their daily life, and they are forced to learn the visual order of graphs that they recognize in practical contexts in everyday life (Salkić, 2015).

The aim of the research was to examine the existence of communication and linguistic competence of a meaningful understanding of the written form of deaf people communication using the method of content analysis.

METHODS

The experiment used an experimental method, which mainly relies on experience and often uses induction in analysis, and is directed to the discovery of certain relationships between things and phenomena. Specific types of relations have been created, which are characterized by the necessity of understanding the information sizes, that is, communication legitimacy. Among the relationships that are discovered through the experimental method are particularly important causal relations in which the essential characteristics of the written communication content response by the recipient of this content to the sender are measured and vice versa. The comprehensibility of speech and communication competence was examined through topics that are the subject of the interest of the deaf between the sender and the recipient.

Sample

The study was conducted on a sample of 70 respondents. The sample was selected according to the following criteria: that the age of deaf children encompasses a period of 10 to 18 years old, attending primary or secondary school, that they are covered by a program of rehabilitation of listening and speaking, that they have preserved their intellectual status and that their average hearing loss is below 75 dB. Considering that the contents of the letter were of the choice of the respondents in relation to the thematic unit, the recipients of those letters, as well as the number of letters written, there were in total 90 individual letters. As a single sample, communication content, a letter from the sender and the recipient was analysed. In total, 45 communication contents, written correspondences.

Measuring instrument

Letters of deaf subjects on free-choice topics were used as a measuring instrument. In order to assess competencies, deaf subjects were subjected to experimental conditions, which were provided by the method of subjecting respondents to communication exchanges through letters. The analysis of the letters led to a methodology that implies a response to six key questions for each content analysis: Which data are analysed?, How are they defined?, What is the sample of the population from which they were drawn?, In which context are these data analysed?, Which are the boundaries of the analysis?, What is the goal of the conclusions?. The research used the basic content analysis questions formulated by Harold Lasswell (Who says what; to whom it says: Why it says: How extensive and with what effect). In the methodological processing, applicating the method the Holsti Ole R model was used, which ranks the application of content analysis into three categories: draw conclusions about the predecessors of communication; describe and draw conclusions about the characteristics of communication; draw conclusions about the effects of communication.

Method of conducting research

The experiment consisted in giving deaf people the task of real postal sending of letters, as mysterious content they were individually supposed to write to their schoolmates, of their own choosing. The experiment was conducted in such a way that the respondents shared envelopes and improvised mail delivery by engaging the "letterhead", so that by their own choice of recipients, respondents sent a postal item to the recipient. Delivery of letters to written addresses was provided, whereby recipients were not aware that they would receive letters. The letters were copied in the transport process, and the originals were delivered to the recipients. After the receiver received the letter, read it without the control of the researcher, and then wrote a response and re-engaged the letterhead, the sender of the letter received the answers to the sent letter. Based on the answer to the letter, the comprehensibility of the written letter was assessed, and therefore the communication and linguistic competence of the deaf respondents.

RESULTS

Content analysis

In order to analyse the content, a letter was used as a graphic system of signs that records a language written on paper, analysed as communication content, shaped by words, styles and sentences, indicating that there is a problem of deafness that significantly affects the disorder of verbal communication, which is reflected on graphical disturbances and linguistic and communication competences as well. The deaf children were subjected to an experimental program of writing and messaging on a free subject across the entire sample of experimental group research. The free writing choice method was used to provide an insight into the linguistic and communication competence of understanding the written text based on respondents' responses to a letter sent based on the personal interests of the deaf children. Interest in events in the objective and subjective world of the deaf population can be the basis for the development of literacy strategies and the choice of the conceptual conceptualization of linguistic content in the education of deaf children. The basic assumption is that the words and phrases most frequently used in the research texts reflect the most important issues of communication competence, in the way that content analysis exceeds the quantitative counting of the word, but rather the qualitative context of the words used in the communication content.

The results of the research on the content analysis of the written communication form of deaf children

Letter 1. The answer of the recipient of the letter to the question posed reflects communication competence, but not at the same time linguistic. Based on the communication elements and the questions raised between the two respondents, an analysis of the elements of the sources of the process of encoding messages, questions and usefulness of the communication content in the context was made, and it can be concluded **that the sender has a meaningful understanding of the communication and linguistic competence of the text, and the recipient has meaningful understanding and communication competences of a textual task exclusively**.

Letter 2. In the response that is reflected in three questions posed and one answer to the question asked, one can conclude that a meaningful understanding of the text has been achieved, thus **the level of communication competence was achieved, but not the level of linguistic competence that is reflected through the agrammatism of the text, and syntactic structure**. The above claims are reflected in the answer to the question in which the receiver accurately responds using the exact date of departure and a well-defined sentence construct. Linguistic incompetence is reflected in all other sentences, but it indicates a contextual understanding of the read and non-repudiation of the thematic whole of the received letter.

Letter 3. The sender of the letter raises four clear questions to which the recipient responds adequately, on the basis of which it can be concluded that a meaningful understanding has been achieved and that **communication competence has been achieved**. The achieved communication competence is confirmed by the joint assurances of the interlocutor that at the time of going out to the city it will be dark and cold, and recommendations to be well trained. **No single respondent in this communication content has achieved linguistic competence**, which can be clearly seen from the agrammatic sentences of the respondents of this communication transcript.

Letter 4. The letter of the sender reflects the agrammatic structures of the poorly used lexical discourse. The letter shows the use of simple constructions, an illogical syntax sequence, but there is also a certain binding of the word **that indicates the communicative comprehensibility of portable communication content**. Although the sentences are linguistically non-systematic, without syntactically used lexical units as well as an incomplete grammatical structure, the entity understood the sent message and confirmed with its response that it was about understanding the written text. By inspecting the content of this letter and responding to the sent letter, it can be noted **that there are elements of comprehensibility of the communication content, although there is no linguistic competence** of the written letter.

Letter 5. In response to the received letter, the respondent responds to the received letter in very modest, simple sentences. From the content of the letter, the poor language competence of the entities can be noticed. By inspecting the content of the response, it can be noticed **that the respondent achieved the minimum comprehensibility of the letter sent**, which leads to the conclusion **that the entity is about reduced communication competence and linguistic incompetence**.

Letter 6. In the letter, it can be noticed that the respondent who wrote the letter had a **relatively good linguistic organization of sentences**. In the sent letter, a relatively good organization of a syntactic organization of a sentence can be noticed that is not composed of two to three words, as is the most common case in the deaf population, but it also has a more complex linguistic structure with the use of adjectives, verbs and attachments, which is rare in the case of harder to hear population. In the entity's response except for inversion sentences and observed substitutions in words, the impression is gained that the recipient of the letter understood the questions asked and tried to respond through one form of non-systematic scheduling in relation to the informative value of the linguistic construct and communication content.

Noting that this is **a linguistic incompetence, it can be noted that the partial understandability of the written form of communication is achieved** in relation to the analysed response.

Letter 7. The letter used classical questions that are in the deaf population in the communications spectrum. It can be noted that the structure of the written form of communication in deaf children is almost always focused on thematic events in the immediate time interval, which is also logical for the educational efforts to bring the deaf children closer to everyday life, and they abound in everyday life with those events that are in line with the educational program. In addition to agrammatism, this letter points to indications of linguistic communication potential because sentences are not so simple enough to justify this claim. However, communication contents and their comprehensibility can be analysed using the method of content analysis only based on reaction and response in relation to the written text, so in this case it can be concluded **that communication competence has been achieved, but the linguistic competence not completely**. Pointing to the agrammatic structure of the sentences, the presence of omissions, substitution and lexical inversion, which diminishes the linguistic value of a written form of communication, in this case, **it is completely possible to talk about communication competence**.

Letter 8. The letter reflects linguistic incompetence and a very poor vocabulary that points to poorly posed questions and ambiguity of the linguistic construct. In response to the question raised, linguistic incomprehensibly written constructions are observed, where the answers are shortened in a way that they only refer to some communication solutions, but it does not notice what the answer is and the question asked. Some communication features suggest that some of the issues are understood. By entering into the analysis of the content of the respondent in communication, one can speak of sentence constructs that refer more to internal speech schemes, described by Chomsky as an unarticulated speech in generative grammar that remained at the level of generativity and did not suffer syntactic and semantic speech production. In this communication content, **limited communication competence can be identified, and not a sign of linguistic competence**.

Letter 9. In the letter, there is a very wide selection of lexical units, but the sentences are constructed to reflect the complete incomprehensibility of the construct, so it is difficult to find the content of the text in a linguistic construct. Understanding is made difficult, but the letter notes the message of introducing a person into a communication that knows the sign language and alphabet.

In response to the letter, it is noticed that the communication content does not follow the flow of the read letter. From this communication written form **linguistic competences could not be noticed**, and **communication competence can hardly be seen in terms of understanding the written form of communication**.

Letter 10. In the letter, a very poor sentence structure is observed. In response to the letter, a well-organized linguistic construct is observed, showing the tendencies of **complete linguistic competence**. However, this incomprehensible written communication message was decoded by the respondent, indicating a deeper psychological recognition of the respondent's mental complex who sent the letter, and the entity corresponds with absolutely correct sentences. In this case, **communication competence and understanding** of the content of the letter can be talked about, and the impression that deaf children have the ability to predict their thoughts in the communication chain is justified, which justifies this letter in which the respondent is in the role of the decipher, regardless that the linguistic discourse in a written form of understanding has not been achieved, but the intention is recognized for the purpose of making such conclusions.

Letter 11. The letter was sent to the hearing person and therefore the response to the letter was not analysed. The sender's letter is analysed for a complex sentence that reads: "I how are me other enida much now only please I love you bye". In the content of the sentence you can see well-placed lexemes such as "how; you; me; other; much; please; I love you; bye", but the letter **does not show understanding of this construct**.

Letter 12. In response to a letter, the respondent tries to answer the questions raised, which **in a linguistic sense are absolutely incompetent** for any form of written communication if viewed out of the context of the response to the letter sent. On the basis of the above, it can be noted that the sender of the communication content reflects the basic elements of literacy through a relatively comprehensible grammatical construction. **It cannot be said that the recipient of the letter masters linguistic and communication competence**.

Letter 13. From the content of the letter it can be indicated what the sender wanted to say to the recipient, but it is a linguistic disorderly written material that, in a linguistic sense, does not reflect the absolute understanding of the articulated complex and could previously be called nonarticular speech. The recipient of a letter corresponds to a letter with sentences that are not in accordance with the received letter. From analysed

communication content, it can be noted **that neither linguistic nor communication competence has been achieved** in terms of understanding communication content.

Letter 14. In the sender of the letter, a well-organized linguistic discourse is observed through linguistically correctly constructed sentences, well-posed questions and conclusions. Expressive speech can be fully understood, and it can be stated that the **he understands both syntactic and semantic sentences enriched with grammatical constructs**. In a response, a less linguistically competent entity, it is noted that he understood the question. By inspecting the contents of this written form of communication expression, it can be noted that the recipient of the letter understood certain questions and gave conditionally stated adequate answers to the questions asked, **which indicates the presence of communication competence**. Considering the fact that the recipient of the letter is less linguistically competent than the sender of the letter, it can be concluded that he was not able to adequately respond to the received content, and in the shortened versions of the answer it can be noted that **the incomprehensibility of the written text is characteristic to this entity** which can be seen in syntactic, lexical as well as grammatical incompetence.

Letter 15. The subject of the sender of the letter cannot adequately differentiate due to short statements and present omissions and substitutions in sentences. From the content of the text in response to the received letter, it can be stated that the written text does not reflect any connection with the received written material. **It is difficult to see communication competence**, but the impression is that respondents understood the letter as an obligation to write something, anything, and not write an adequate response to the received letter. It can be clearly seen that respondents **lack linguistic competence**.

Letter 16. In the letter respondent uses long and complex sentences with relatively good use of semantic and syntactic constructions as well as attachment provisions for place and time. A poor grammatical construction is noticed. In response to the received letter, the poorer linguistic competence of the recipient is noticeable, which obviously does not have an adequate understanding of the read script. In addition to clearly visible weak communication and linguistic competencies, the entity on the received letter still fits. Based on the content of the letter, **it is difficult to determine the existence of communication competence** based on a written form of expression, but a complete linguistic incompetence is obvious.

Letter 17. The letter notes the order of the questions that are well constructed in the linguistic sense, and **satisfy linguistic competence**. The answer is designed in such a way that **the communication competence is fully achieved** between the two respondents, although in some language construct, they are understandable to them, and can be expressed in the jargon as it reflects some sort of content ambiguity.

Letter 18. By analysing the content of the sent letter, **it cannot be stated that the respondent masters the correct linguistic and grammatical structures in communication**, but from the answer to the received letter it can be noticed that the comprehensibility of the written content occurred. It can also be noted that the recipient absolutely understands the sent communication content **reflecting the communication competence**, but the sentences are so agrammatic that it would be difficult to talk about the comprehensibility of the communication content between this person and the person who masters linguistic and grammatical rules of communication.

Letter 19. The letter from the sender is structured exclusively from questions, which are short linguistic constructions typical for the deaf population, which deaf people learn well in the form of questions. The response to the received letter contains completely incomprehensible language expressions that the entity uses through sentences. In response, in addition to recognizing the name of the sender of the letter, **no linguistic and communication competence in linguistic exchange of content can be noticed**.

Letter 20. In the letter between the two respondents, there are brief questions such as "How are you?; What's up?; Analysing these communication contents, **it can be concluded that there is communication competence with very few self-selected linguistic constructs** between the two respondents.

Letter 21. In the letter of exchange of communication contents, it can be noticed that the sender of the letter has a much better linguistic discourse than the respondent who is the recipient of the letter. From the content of the text of the respondent who writes the letter, one can see what the responder is writing about. The understandability of the short sentences found in this letter is inherent to the deaf population, and these short sentences are composed of two or three words. When a respondent tries to compose a sentence of more than three words, there is a grammatical and syntactic confusion that makes understanding difficult. This inheritance of the deaf population can also be seen in this respondent. The sentences are grammatically and syntactically unclear. The recipient of the communica-

tion content in the response to the letter **does not indicate the understanding of the read script** and only corresponds with the sentence: "Dear Elmir", and in such a way, reflects the conclusion that it is only able to recognize the sender of the letter because it does not give any other answers to the received communication content.

Letter 22. In the exchange of written communication content between the two respondents, it can be observed that there are structural inversions in written expression in both respondents. A letter sent by the sender is structured in each sentence used by inversion in terms of omissions and substitution of votes, but some elements of metathesis are also noticed. In relation to the response to the received letter, it can be noted that **communication competence exists** in this exchange of communication content, because the impression is that the respondent understood the content of the text, but **no part of the letter suggests that there is a linguistic competence** of the respondents.

Letter 23. Immediately at the beginning of the letter you can notice the metatheses visible in the greeting. Metathesis is also noticeable in the response to the letter. In addition to the fact that the letter was completely agrammatically and synthetically illogical, as can be seen from the content of the letter, the impression that the respondent understood what is being done and in a similar style corresponds to a letter that does not differently from the received content. On the basis of the above, it can be noted that in this case it is **a communication competence**. It can also be noted that respondents in the written communication content **have no linguistic competence**, which is evident from the sentences that are written agrammatically and syntactically illogical.

Letter 24. In the communication content between respondents who have undergone a long-term rehabilitation process also **a communication and linguistic competence in mutual communication** can be seen. There are deaf children who, in communicational and linguistic terms, show exceptional talent, and besides having severe hearing impairment with such skills and adequate rehabilitation approach, they achieve besides communication and linguistic competence, as can be seen from the presented communication content.

Letter 25. In the letter, the sender asks the short questions that the recipient understands and gives answers that indicate the comprehensibility of the written content, which is also noticed in a more complex sentence sent by the sender. It can be noted that in this letter **there is communication competence, but not a linguistic competence**.

Letter 26. The written text of the letter is agrammatic. The text is written in a way that the syntactic relationship, but also the semantic performance, is disproportionate to the extent that the letter is difficult to understand and is probably the reason why this letter was not answered.

Letter 27. The letter is very short. The content of the letter points to an unclear concept in organizing text comprehensibility and a discrepancy in the linguistic construct. In response to the posted letter, **there is a lack of both communication and linguistic competences**, which can be seen in a short answer.

Letter 28. In a letter whose content points to both communication and linguistic competence and in which disorders can be seen in the use of attachment provisions, **communication competence can be noticed, but not a linguistic one**. Answers to the questions of the sender point to the conclusion that they are in correspondence with the received content, based on which it can be concluded that this is the communication competence of the respondents.

Letter 29. In the written content of the communication chain, the sender has posed brief questions to the recipient, and on the basis of the textual part, it can be concluded that the thought construct has conceptual relations of the terms used with respect to their meanings and without a lot of characteristic errors that would make the textual comprehension of the text difficult. On the basis of the answer received, it is noted that the communication content was understandable to the recipient, and through the linguistic construct **it can be concluded that successful communication has been made here and that comprehensibility is at the level of communication competence**.

Letter 30. At the communication level in the written content **we cannot talk about linguistic and also communication competence**, because the textual content in the response does not reflect the comprehensibility of the receiving content, which can be noticed in the sentences that indicate the fact that the recipient did not adequately analyse the content of the received letter.

Letter 31. The text written in the letter does not refer to a linguistic construct, but to language ideas, which deaf children learn and use without any problems. In response to the letter, a similar linguistic discourse is observed, **which does not point to either the linguistic or the communicative competence** of the respondents.

Letter 32. In the communication content **communication and linguistic competence is noticed**, where linguistic discourse is fully developed at the level of complete understanding, and it can be concluded that respondents have mastered the language and written form of expression.

Letter 33. In the language discourse between the two respondents, **communication competence** is observed in a written communication form in response to the letter, because the content of the answer agrees with the content of the letter, but the agrammatism and the poor syntax structure point to the fact that **one cannot talk about linguistic competence**.

Letter 34. In the written communication between the respondents, a modest use of the words can be noticed, and the words that refer to simple questions are actual at a given moment. The answer to the received letter indicates that the respondent understood the textual content, and in a modestly interpreted linguistic form with the present omissions, substitutions, and metatheses responded in accordance with the received text. Based on the consistency of the linguistic constructions used, it can be concluded that **there is communication competence, but not a linguistic competence**.

Letter 35. In the language discourse, it can be noticed that the questions asked by the recipient of the letter with syntax errors are in the language construct. In answering each question, **we can notice an absolute communication competence, but not a linguistic one**.

Letter 36. In the communication content, the respondent sends a letter to a hearing person and replies to her letter. In the written exchange of communication contents **one can notice the communication and linguistic competence** of the deaf responder, with small linguistic inversions.

Letter 37. In the communication discourse, a modest selection of words is noted, which in the linguistic sense do not have an adequate competence level of understanding, but the answer to the letter written by the receiver indicates the presence of language competence. In this communication content **there is communication and linguistic competence**.

Letter 38. In the communication exchange, there is a discrepancy in the selection of words that indicate a type of activity and activity that the respondent is trying to tell the recipient. A deeper analysis can determine the intent of communication content, but in response to the received letter, **the linguistic competence of the recipient is noticed**. It is also noted that the recipient did not fully understand the received letter, which is seen from the sentences that are not in correspondence with the received written content, so that **this is not an absolute understanding between the respondents in the communication**.

Letter 39. The letter sent is written modestly, where, along with agrammatism, it sends several messages and emotional characteristics. In the answer, one can notice partial comprehensibility to one raised question that ends the communication, with no deeper communication details. In this case, **we cannot talk about the linguistic nor the communicative competence** of the deaf respondents.

Letter 40. The letter is a communication exchange in which the deaf respondent sends a letter to a hearing person and replies to her letter. By analysing the communication content of the deaf person one **can note the communicative competence** of the deaf person, who understood the answer to the letter of a hearing person. The sentences of the deaf respondent are agrammatical and **we cannot speak of linguistic competence**.

Letter 41. By analysing the communication content between the two deaf respondents, the comprehensibility of the written text can be established. Reasonableness is reflected through the answers to the questions asked. On this basis, it can be concluded that **there is a communication competence**, but the organization of the linguistic construct indicates that the **respondents are not linguistically competent**.

Letter 42. In communication between the two deaf respondents, one can notice the understanding of the written form of communication by the recipient of the letter, and conclude that there is a **communication competence**. Also, by analysing the sentences of both respondents, it can be concluded that there is **a linguistic incompetence** of respondents.

Letter 43. The communication content shows the communication between the deaf and the hearing respondent. **The linguistic incompetence** of a deaf respondent is reflected in questions posed to a hearing person. Respondents' responses indicate the understanding of communication content, indicating **communication competence**. Based on this, it can be noted that even by analysing the written material of the deaf respondent, they can achieve communication competence in the exchange of communication content with the deaf.

Letter 44. In the communication discourse, the modest linguistic structure of the selected words is noticed, which in the simplest constructs are not adequately used, which can be noticed in the enclosed simple language structures sent by the sender. In his response, the recipient wrote a linguistically incompetent text that is inconsistent with the received content, and **communication and linguistic competence cannot be noticed**.

Letter 45. The communication content is about the exchange of letters between the hearing and the deaf respondents. By analysing the content of the response to a letter written by a deaf person, **the absolute existence of both the linguistic and communication competencies** of the deaf respondent can be identified. This letter shows that it is possible to understand and exchange written communication content between deaf and hearing people.
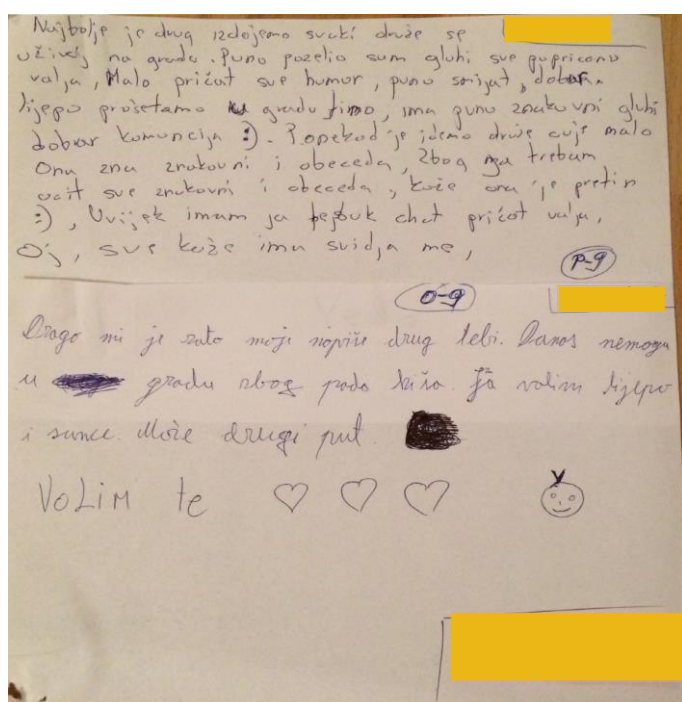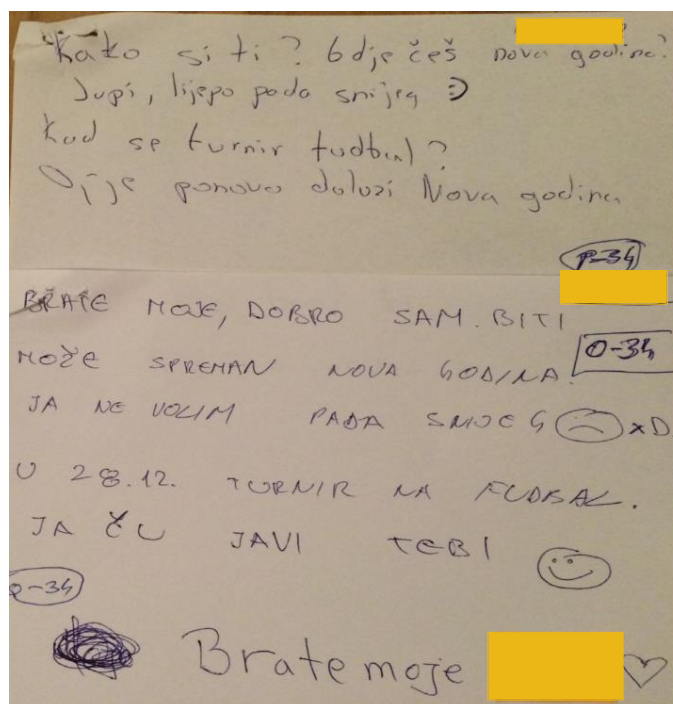

Figure 1. Example of a letter

Figure 2. Example of a letter

DISCUSSION

Based on a detailed analysis of the content of the letters, the commission for the assessment of communication and linguistic competence found that the communication and linguistic competence in this research was analysed through 45 communication exchanges (letters), which means that in this research could be attended by a maximum of 90 respondents and achieve a maximum of 180 linguistic and communication competencies. Considering that 4 interviewed respondents took part in this research, with which the deaf respondents responded, the total number of 180 communication and linguistic competences was reduced by 8, because their competences were not the subject of this research. In addition to the above, in the 2 communication processes the respondent's letter did not arrive, so only the linguistic competence was analysed with the letter-transmitter, and the number of maximum possible competences was reduced by two more communication competences. From the above, we can conclude that the total number of linguistic and communication competences in this study is 170, of which 84 are communication and 86 linguistic competences and the same number of respondents (Table 1). By inspecting Table 1, it can be noted that most of the deaf respondents, or 82.14%, have communication skills, which means that the respondents understood the messages from the received letters and accordingly adequately responded to the written content. It can also be concluded that the majority of respondents, or 75.58%, lack linguistic competence and that education and rehabilitation processes should work on improving the linguistic competence of deaf people.

Table 1. Commission's conclusion on the existence of communication and linguistic competence

Variable	Communication competence		Linguistic competence	
	f	%	f	%
There is communication competence	69	82.14		
There is no communication competence	15	17.86		
There is linguistic competence			21	24.42
There is no linguistic competence			65	75.58
Total	**84**	**100.0**	**86**	**100.0**

Deaf people from the impossibility of converting an internal speech scheme into an expressive speech expression in mutual communication via letters maximize the use of shortened voice schemes that determine communication ability. By analysing the content of the written communication form of deaf people, one can speak of sentence constructs that refer more to internal speech schemes, which Chomsky described as an unarticulated speech in generative grammar that remained at the level of generativeness and did not suffer syntactic and semantic speech production. The structure of the written form of communication in deaf children is almost always focused on thematic events in the immediate time interval, which is also logical, due to the educational efforts to bring deaf children closer to everyday life, and they are abundant in everyday life with those events that are in line with the educational program. The deaf people in written communication are able to decode and correctly answer formed written communication content, indicating a deeper psychological recognition of the mental framework. The impression is that deaf children have the ability to propagate thoughts and the ability to decrypt communication contents in the communication chain. In the written correspondence between the deaf people, there is the comprehensibility of short sentences. These short sentences are composed of two or three words, and when a deaf person attempts to compose a sentence of more than three words, there is a grammatical and syntactic confusion that complicates understanding. The subject of a written form of communication in some deaf people cannot adequately differentiate due to short statements and present omissions and substitutions in sentences. The agrammatic structure of the sentences, the presence of omissions, substitutions and lexical inversions, reduce the linguistic value of the written form of deaf communication. The deaf children in their written communication use linguistic idioms, which they learn and use without any problems. Well-placed lexemes can be seen in the sentences.

There are deaf children who in communicational and linguistic terms show extraordinary talent, and besides having severe hearing impairment with such skills and adequate rehabilitation approach they achieve in addition to a communication competence a linguistic competence too. The hearing people through the written analysis of deaf people can make written communication in the exchange of communication content with the deaf.

CONCLUSION

Deaf children from the impossibility of converting an internal speech scheme into an expressive speech expression in mutual communication through letters maximize the use of shortened voice schemes that determine communication ability. Most deaf children (82.14%) have written communication skills, understand messages from received letters and according to the topic adequately respond to written content. It can also be concluded that most deaf children (75.58%) do not have linguistic competence and that education and rehabilitation processes should work on improving the linguistic competence of deaf people. The agrammatic structure of the sentence, the presence of omissions, substitutions, and lexical inversions, reduce the linguistic competence of the written form of communication of deaf children. Linguistic competence in written communication have about 24.42% deaf children. In the written correspondence there is the comprehensibility of short sentences composed of two or three words. Deaf children in their written communication use linguistic idioms, which they learn and use without any problems. Well-placed lexemes can be seen in the sentences.

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DIFFERENCES IN TACTILE PERCEPTION IN CHILDREN WITH AND WITHOUT VISUAL IMPAIRMENT

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ABSTRACT

The aim of this study was to examine the differences in tactile perception in children with and without visual impairment. The study covered 30 examinees with visual impairment and 30 subjects without visual impairment aged 7-13, both sexes. The research was conducted in the "First Elementary School" ("Prva osnovna škola") in Zavidovići and the "Centre for Blind and Visually Impaired Children and Youth" Nedžarići - Sarajevo. The results of the study showed that children with visual impairment have a better developed tactile perception in their entirety, compared to children with no visual impairment, and that there is a statistically significant difference in the individual variables of tactile perception: " Two-Point Discrimination" (right), " Two-Point Discrimination R "(left) and" Stereognosis "(left).
***Key words**: tactile perception, children with visual impairment, children without visual impairment*

INTRODUCTION

Perception or observation is the process by which we become conscious of objects, their properties and relationships through sensory organs. Although sensory content is always present in perception, it is influenced by attitudes and past experience, and is not a passive registration of stimuli that affect sensitive organs (Stančić, 1991). Explaining the role of perception in cognitive development, Montesori (2001) says that the senses are organs of capturing images of the outside world that are needed for intelligence, such as the arm of the body to capture the material things necessary to the body.

Visual impairment, especially blindness, is a difficult and complex disability, which conditions the development and putting into function of the remaining abilities, hearing, touch, smell, taste and high degree of mental concentration (Teskeredžić, 2005). Tactile perception is of great importance for blind children as a compensation mechanism for vision deficiency (Tulumović, 2013). Tactile perception has a great significance in acquainting the environment not only with people with visual impairments, but also with people without visual impairment. Depending on the information we want to get to know, we can use different parts of the body, especially the hand we can grab, lift, etc. (Mulahusic, 2017).

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Patients with visual impairment use a tactile and kinaesthetic input to learn about the environment they are in. Such an input should not be considered a "smaller sensation" that is used instead of vision, but should be viewed as another learning aid system (Cox and Dykes, 2001).

The processes of receiving, transmitting and processing tactile information rest on tactile abilities. Irregularities are transmitted to the back roots of the spinal cord or sensory cores of the cranial nerves. Furthermore, the importance of the spin-talamatic pathway and the system of medial lemniscussion, depending on the quality of the irritant, and the post-partial region of the parietal lobe. The processing of tactile sensations, or the process of perception (sequential analysis and integration into conscious forms), takes place in the secondary zones of various parts of the parietal lobe. These areas allow analysis of direction, strength, contacting localization, muscle movements and the like (Jablan, 2007).

According to Lukić (2007), it is important that the child learn to use his hands. The importance of well-organized and skilful hand movements in a blind baby and practically blind children lies in the fact that the hand must be a substitute for vision (Radžo, 2008).

Correct coordination, or coherent and rational finger and left-handed finger movements, can significantly facilitate and speed up the process of learning, reading and writing in children with visual impairment (Radžo Alibegović & Begić, 2017).

The aim of this study was to evaluate the difference in tactile perception in children with and without visual impairment.

RESEARCH METHODS

Sample respondents

The sample of respondents consisted of children with visual impairment, elementary school age and children with no visual impairment, who, by age and gender, were equated with an experimental group.

The study covered a total of 60 respondents: 30 people with visual impairment, 30 subjects without visual impairment, aged 7-13, both sexes.

Method of conducting research

The research was conducted in the "First Elementary School" ("Prva osnovna škola") in Zavidovići and "Centre for Blind and Visually Impaired Children and Youth" Nedžarići - Sarajevo, with the prior consent of the parents whose children constituted the sample and the consent of the institutions in which the research was conducted. Children with visual impairment and children without visual impairment, as well as their parents, were previously familiar with the method of testing, where a detailed examination method was presented.

All respondents were examined individually in a separate room and a pleasant ambience.

Measuring instrument

Assessment of the development of tactile functions was examined using a clinical development scale from Luria-Nebraska for Children (LNNB-C). (Golden, 1987).

A scale for estimating tactile functions "C3" was used to estimate tactile functions. It contains 16 particles grouped in pairs (the same task is done with right and left hand).

Data processing methods

After the survey, the data obtained were processed by the computer statistical program SPSS 17.0 for the Microsoft Windows operating system. The basic statistical parameters were calculated: minimum and maximum results, arithmetic mean and standard deviation. To determine the significance of differences in the arithmetic mean of the observed variants of tactile perception between the two groups of subjects, a t-test for an independent sample at a significance level of 5% was used.

RESULTS AND DISCUSSION

Results of descriptive statistics in relation to tactile perception of children without visual impairment

Table 1 shows the measures of central tendency and dispersion measures in relation to individual variables of tactile perception in children without visual impairment. The arithmetic mean of the variable "Topognosia of the right" is .37 ± .61, median and modus 0, while the minimum and maximum results range from 0-2.

By inspecting the remaining individual tactile perception variables, it can be noted that the values of the arithmetic mean are less on the right-hand variables, except for the variable "Differentiation of tactile forearm sensations" where the values of the arithmetic meanings on the left and right sides are 0.

That is, on the mentioned variable, the respondents have an equally developed tactile perception on both the right and the left hand.

For a better understanding, it is necessary to note that according to the instructions of the author of the applied instrument, a 0 value denotes a normally developed function, 1 denotes a borderly developed function, and value 2 denotes a pathologically developed function.

Such results are expected, taking into account that the majority of subjects without visual impairment are the dominant right arm, and therefore use it more and as such it more easily recognizes tactile sensations.

Table 1. Measures of central tendency and dispersion measures in relation to individual variables of tactile perception in children without visual impairment

Variables	M	SE	MED	MOD	SD	MIN	MAX
Topognosia R	0.37	0.11	0.00	0.00	0.61	0.00	2.00
Topognosia L	0.60	0.16	0.00	0.00	0.86	0.00	2.00
Sensitivity to pain R	0.13	0.08	0.00	0.00	0.43	0.00	2.00
Sensitivity to pain L	0.20	0.07	0.00	0.00	0.41	0.00	1.00
Discrimination on the strength of pressure R	0.60	0.13	0.00	0.00	0.72	0.00	2.00
Discrimination on the strength of pressure L	0.93	0.14	1.00	1.00	0.78	0.00	2.00
Two-Point Discrimination R	0.77	0.13	1.00	1.00	0.73	0.00	2.00
Two-Point Discrimination L	0.77	0.13	1.00	1.00	0.73	0.00	2.00
Differentiation of tactile forearm sensations R	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Differentiation of tactile forearm sensations L	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Graphesthesia R	0.20	0.09	0.00	0.00	0.48	0.00	2.00
Graphesthesia L	0.33	0.10	0.00	0.00	0.55	0.00	2.00
Graphesthesia numbers R	0.17	0.08	0.00	0.00	0.46	0.00	2.00
Graphesthesia numbers L	0.33	0.13	0.00	0.00	0.71	0.00	2.00
Stereognosis R	0.20	0.07	0.00	0.00	0.41	0.00	1.00
Stereognosis L	0.37	0.12	0.00	0.00	0.67	0.00	2.00

Results of descriptive statistics in relation to tactile perception in children with visual impairment

Progress in sequential learning is similar to all senses. In children with visual impairment, more attention should be paid to the approach to pracing the task of presenting skills in smaller parts and advancement. Early research suggests that the development of tactile discrimination in children with visual impairment follows the model of using large to fine arm movements (whole hands to fingertips), from the earlier use of active touch to passive, from simpler to more complex. Recent research has provided more final information on tactile, kinaesthetic and haptic systems, and their effectiveness in making discrete differences and identifying objects and materials with different characteristics of Barrag and Erin (2001).

Studying twenty children with blindness in three levels from kindergarten to second grade, Kersh-man (1976) identified the following order in which this group acquired tactile skills:
1. Great solid geometric shapes
2. Flat figures (puzzles) less than geometric shapes
3. geometric figures with tactile dots less than flat figures
4. figures with tactile dots
5. Braille figures.

Heller (1985, 1989) concluded that people who never saw were equally successful in tactile perception, as did those who later healed, which led her to conclude that a visual experience was not necessary for tactile perception. Knowing Braille is not a guarantee for the correct representation of tactile images, although tactile skills and tactile perception experience have an impact. Earlier, she concluded that the simultaneous use of sight and touch by visually impaired people improved the recognition of tactile patterns; she suggested that people with high visual impairment use vision to conduct tactile research.

Whether the results obtained from Table 2 are analysed, we can see that the arithmetic mean of the variable "Topognosia on the right" was .33 ± .66, median and modus 0, while the minimum and maximum results ranged from 0-2. By inspecting the remaining individual variables of tactile perception, it can be noticed that the values of the arithmetic meanings are slightly lower on the right-hand variables, and these variables are „Sensitivity to pain", „Discrimination on the strength of pressure", „Two-Point Discrimination", „Graphesthesia" „Graphesthesia numbers" and „Stereognosis".

From the above, it can be noticed that the tactile perception in children with visual impairment is proportionately developed on the right and left hand, because the differences between the arithmetic mean ranges between .05-.07. On the variable "Differentiation of tactile forearm sensations" there is a complete congruence in the development of tactile perceptions on the right and left hand, where the values of arithmetic meanings are 0.

Similar results were also made by Radžo Alibegovic (2013), examining the development of tactile functions in subjects with visual impairment. To determine statistically significant differences among the observed variables, the t-test was used at a level of significance of 5%. The results of the study also showed that there are no statistically significant differences between the arithmetic mean of the observed variants of tactile perception in subjects with visual impairment. (p > ,05). The author came to the conclusion that tactile functions of the patients with visual impairment developed harmoniously on the right and left hand.

Jablan and Eskirović (2002) performed research on a sample of 35 girls and 60 boys with visual impairment and examined the quality of the development of tactile functions. It has been established that the tactile functions of pupils with vision impairment are harmoniously developed on the left and right hand, but that there is a lack of uniformity in the degree of complexity of the functions examined.

Table 2. Measures of central tendency and dispersion measures in relation to individual variables of tactile perception in children with visual impairment

Variables	M	SE	MED	MOD	SD	MIN	MAX
Topognosia R	0.33	0.12	0.00	0.00	0.66	0.00	2.00
Topognosia L	0.47	0.13	0.00	0.00	0.73	0.00	2.00
Sensitivity to pain R	0.20	0.10	0.00	0.00	0.55	0.00	2.00
Sensitivity to pain L	0.13	0.08	0.00	0.00	0.43	0.00	2.00
Discrimination on the strength of pressure R	0.20	0.09	0.00	0.00	0.48	0.00	2.00
Discrimination on the strength of pressure L	0.30	0.11	0.00	0.00	0.60	0.00	2.00
Two-Point Discrimination R	0.53	0.11	0.00	0.00	0.63	0.00	2.00
Two-Point Discrimination L	0.60	0.13	0.00	0.00	0.72	0.00	2.00
Differentiation of tactile forearm sensations R	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Differentiation of tactile forearm sensations L	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Graphesthesia R	0.27	0.08	0.00	0.00	0.45	0.00	1.00
Graphesthesia L	0.23	0.08	0.00	0.00	0.43	0.00	1.00
Graphesthesia numbers R	0.27	0.12	0.00	0.00	0.64	0.00	2.00
Graphesthesia numbers L	0.57	0.16	0.00	0.00	0.90	0.00	2.00
Stereognosis R	0.07	0.05	0.00	0.00	0.25	0.00	1.00
Stereognosis L	0.10	0.06	0.00	0.00	0.31	0.00	1.00

Determination of differences in individual variables of tactile perception among children with and without visual impairment

Table 3 shows the results of the t-test in relation to the development of individual variables of tactile perceptions and the observed group of subjects. Based on

the obtained t-test results shown in Table 3, it can be concluded that there is a statistically significant difference in the three observed tactile perception variables. These variables are "Two-Point Discrimination Right", "Two-Point Discrimination Left", and the variable "Stereognosia Left".

Table 3. Differences in the development of tactile perceptions in relation to visual impairment

Variables	Visual impairment	M	SD	t	*p*
Topognosia R	With	0.33	0.66	-0.20	0.84
	Without	0.37	0.61		
Topognosia L	With	0.47	0.73	-0.64	0.519
	Without	0.60	0.86		
Sensitivity to pain R	With	0.20	0.55	0.52	0.605
	Without	0.13	0.43		
Sensitivity to pain L	With	0.13	0.43	-0.61	0.542
	Without	0.20	0.41		
Discrimination on the strength of pressure R	With	0.53	0.63	-1.32	0.189
	Without	0.77	0.73		
Discrimination on the strength of pressure L	With	0.60	0.72	-0.88	0.378
	Without	0.77	0.73		
Two-Point Discrimination R	With	0.20	0.48	-2.51	**0.015**
	Without	0.60	0.72		
Two-Point Discrimination L	With	0.30	0.60	-3.52	**0.001**
	Without	0.93	0.78		
Graphesthesia R	With	0.27	0.45	0.55	0.583
	Without	0.20	0.48		
Graphesthesia L	With	0.23	0.43	-0.78	0.434
	Without	0.33	0.55		
Graphesthesia Numbers R	With	0.27	0.64	0.69	0.49
	Without	0.17	0.46		
Graphesthesia Numbers L	With	0.57	0.90	1.11	0.269
	Without	0.33	0.71		
Stereognosis R	With	0.07	0.25	-1.52	0.133
	Without	0.20	0.41		
Stereognosis L	With	0.10	0.31	-1.98	**0.052**
	Without	0.37	0.67		

In other words, the obtained t-test results show that at the level of statistical significance of .01 and .05 patients with visual impairment achieve better results on the variables " Two-Point Discrimination Right" and " Two-Point Discrimination Left " in relation to subjects without visual impairment.

Also, subjects with visual impairment at the level of statistical significance of .05 achieve better results on the variable "Stereognosia left" compared to those with no visual impairment. From the obtained results in Table 3, it can be noticed that the patients with visual impairment achieved better results on other right-and-left variables, but that these differences were not statistically significant. Tactile discrimination is the ability to distinguish two simultaneous tactile irritations. Tactile discrimination is very pronounced on the fingertips, and considerably less on the palm skin, soles and the back. It depends on the density of tactile receptors in the skin, as well as on the size of the rep-resentation of these parts of the body in the sensitive zone of the brain.

Tactile discrimination is considered to be a group of fine, epicritical, superficial sensibility, with which we distinguish the object's touch and the localization of touch and is very important in the perception of the form. The respondents were asked to tell the examiner whether they felt one or two ends of the measuring instrument in contact with their finger, and to recognize and notice the difference in the alternating touch of the finger with 1 or 2 touches, where the distance between the two points was 0 to .5 mm.

It is known that people with visual impairment read the Braille letter with their fingertips and have fingers more sensitive to tactile stimuli than children without visual impairment. Also, people with visual impairment use daily tactile perception as compensation for vision and the daily dependence on touch sensation improves tactile sensitivity.

It is therefore understandable that subjects with visual impairment achieved statistically significantly better results than subjects without visual impairment on the variables of the ability of stereognosis, i.e. tactile recognition of well-known objects without the involvement of the senses and the distinction of touch (Two-point discrimination) at the tips of the finger.

Radžo Alibegović (2013) examined the sample of 70 respondents (35 with visual impairment and 35 without visual impairment) by examining the differences between the development of tactile functions between subjects with visual impairment and subjects without visual impairment. It was found that there are statistically significant variations in variables: Topognosia R, Topognosia L, Two-Point Discrimination R, Two-Point Discrimination L and Stereognosis L.

CONCLUSION

Based on the results of the conducted research it can be concluded that:

- Children with visual impairment have a better developed tactile perception in their entirety, compared to children without visual impairment.
- There is a statistically significant difference in individual variants of tactile perception among children with and without visual impairment on variables: „Two-Point Discrimination R, „Two-Point Discrimination L and „Stereognosis L".
- The findings obtained by this study can be useful for working with children with visual impairment, as they point to the need to exercise tactile perception, and especially in those areas where children with visual impairment have shown the greatest lagging behind.
- On the basis of the obtained results, appropriate exercises of tactile perception can be determined, behind each individual child, which could help in the selection of methods and principles of working with children with visual impairment.

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THE IMPACT OF STUTTERING ON THE ABILITY TO ACQUIRE ACADEMIC KNOWLEDGE IN CHILDREN OF SCHOOL AGE

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ABSTRACT

The aim of this research was to establish the level of abilities that is a prerequisite for acquiring academic knowledge of children who stutter. The sample consisted of 102 subjects, of whom 42 children were experimental, and 60 children constituted a control group. We used following instruments: Riley test - a test for stuttering estimation, for quantitative speech analysis and ACADIA - a capacity assessment test that is a prerequisite for the acquisition of academic knowledge. The obtained results showed that there are differences in perceptual, visuo-motor, non-verbal and speech-language abilities of children stuttering in relation to children who do not stutter. There is a significant connection between the stuttering and the success of the Serbian language and the stutter and education of the parents. These differences should be used as the starting point in a therapeutic program for working with children who stutter.
Key words: stuttering, academic knowledge, children of school age

INTRODUCTION

The speech is aware intentional dynamism of the continuous harmonic and rhythmic wave of sounds of various frequencies and intensity that maintains the psychophysical unity of the human being during the adaptation (Brajović, 1981). Observing such a wide process of listening and speaking, we can conclude that the speech function, as well as the listening function, is extremely complex (Dobrota, 2011). Listening is the auditory process of higher nervous activity and conditioned by the maturation and experience factor.Outbursts in the early developmental period of the child can impair all levels of speech-language development and so that in the field of fluency of speech.

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Stuttering is the most common fluency disorder and is defined as disfluency in speech. Disfluency can also occur in other pathological conditions - Tourette's syndrome, spastic dysphonia, Parkinsonism, palilalia, apraxia, tachifemia...

This is a non-fluent voice behavior that results from the existence of differences between: psycholinguistic factors (phonology, prose, syntax, semantics, cognition, pragmatics), psychosocial factors (parents and others that significantly influence the development and upbringing of children, fear, social burden of discourse) and physiological factors (beginning of voice and limited time, laryngeal and sublingeal tension, sensomotor coordination, articulation, anatomy of the nervous system, respiration and genetics) (De Nil, 1999).

Stuttering affects the entire personality of the child and should be viewed as a multidimensional problem, ie it should be observed through motor, linguistic, cognitive and emotional development and should be treated as such (Adams, 1990; Smith et al., 1996).

Basic academic skills include reading, writing and mathematical skills and their acquisition depends on personal and environmental factors. Personal factors are cognitive abilities and non-cognitive factors (child motivation, personality characteristics) that enable acquiring knowledge and skills (Gligorović 2013). The enviromental factors include: school, family and sociocultural milestones in which the child lives. The influence of enviromental factors is reflected on the quality of perceptual and motor functions that are an important link between emotional and cognitive development for the acquisition of academic knowledge and skills (Gligorović et al., 2011).

Intelligence is an important prerequisite for outcomes of education (Rhode & Thompson, 2007) because there is a high correlation between intelligence and academic achievement (Nikolasević et al., 2014). Other research has confirmed the importance of specific cognitive functions and enviromental factors (Gligorović & Buha 2010, 2012; Spinath et al 2006).

The aim of the research was to determine the level of abilities that are the prerequisite for acquiring knowledge in stuttering children and compare them with the abilities of children who do not stutter.

The specific objectives were:

1. Assess perceptual abilities in children who stutTt2. Assess the perceptual abilities of non-stuttered children;
3. Assess viso-motor abilities in children of who stutter;
4. Assess visually-motor skills in non-stuttered children;

METHODS

In this paper the methods of research used are described in detail. The sample consisted of an experimental and control group. The experimental group consisted of 42 patients (33 boys and 9 girls) of the Institute for Psychophysiological Disorders and Speech Pathology "Prof. Dr CvetkoBrajovic "in Belgrade. During 2010/2011, they were treated for speech disorder by type of stutter, while the control group consisted of 60 students (40 boys and 20 girls) of elementary school age who did not stutter. The criteria for inclusion in the experimental group were: age (from 7 to 13 years), duration of speech therapy (6-12 months), level of intelligence (average and above average), weight of stuttering (light, medium and heavy), success at school ,grade in Serbian language, grade in mathematics and education of parents.

Groups were harmonized with each other according to gender, age, school success, intelligence, success in mathematics and the Serbian language, and the education of father and mother.

In this research, the following instruments were used:

1. Riley test - This test evaluates quantitative speech analysis by following three parameters: frequency, physical concomitants, and duration of the longest block. The use of this test defines the degree of stinging difficulty (light, medium, heavy).
2. AKADIA - The test allows for registration of chilren that could have difficulty in mastering school materials due to some abilities that have not yet developed sufficiently. It is a test of developmental capabilities and consists of 13 subtests and each subtest evaluates cognitive functions. It is intended for children aged from 6.3 to 12.3 years.

In the framework of data processing and analysis, adequate statistical methods have been applied which examined the significance of the variables tested: the measures of central tendency, variation measures, variance analysis, t - test, Hi - square test and graphical and tabular presentation.

RESULTS

Table 1. Connection between intelligence and stuttering

			Stuttering		
			YES	NO	TOTAL
Intelligence	average	total	26	46	72
		%	61.9%	76.7%	70.6%
	extraordinary	total	16	14	30
		%	38.1%	23.3%	29.4%
Total		Total	42	60	102
		%	100.0%	100.0%	100.0%

The $\chi 2$ test of independence showed no significant relationship between stuttering and intelligence, $\chi 2$ (1, n = 102) = 1.931, p = .165> .05. Amongst those who stutter, 38.1% are super-intelligent, and among those who do not stutter, 23.3%. Perhaps the difference is significant, but due to the smaller sample of the respondents, this difference is not large enough to determine that it was due to the presence of stuttering.

Table 2. Results of testing effects of stuttering and intelligence on AKADIA test

AKADIA test/subtests	factor		
	stuttering	intelligence	stuttering*intelligence
Auditory discrimination (1)	**.002**	.297	.684
Visomotor discrimination and the possibility of herding (2)	**.000**	**.001**	.459
Visual discrimination (3)	.541	**.001**	.419
Drawing shapes (4)	**.001**	.098	.954
Visual memory (5)	**.002**	.221	.091
Audio-visual association (6)	.753	**.001**	.181
Trace and encryption (7)	.305	**.000**	.727
Auditory memory (8)	.213	**.003**	.171
The skill of creating concepts (9)	**.007**	**.000**	.200
Acquired language goods (10)	.945	**.006**	.770
Automatic language goods (11)	**.024**	**.000**	.232
Visual association (12)	.575	**.000**	.905
Drawing (13)	.064	**.032**	.433

This table shows the slight influence of stuttering on the subtests Auditory discrimination, Visuomotor coordination and the possibility of herding, Drawing shapes, Visual memory, Skill of creation of concepts and Automatic linguistic goods while on subtests Visuomotor coordination and traceability, Visual discrimination, Audio-visual association, Tracking and Encryption, Auditory Memory, Creation Skills, Acquired Language Goods, Automated Lingual Treasures, Visual Association, Drawing there is an influence of Intelligence.

Table 3. Connection between success in Serbian language and stuttering

| | | | Stuttering | | TOTAL |
			YES	NO	
Serbian	**4**	total	12	6	18
		%	29.3%	10.2%	18.0%
	5	total	29	53	82
		%	70.7%	89.8%	82.0%
Total		Total	41	59	100
		%	100.0%	100.0%	100.0%

The χ2 test of independence showed a significant link between stuttering and success in Serbian language, χ2 (1, n = 100) = 4.754, p = .029. A large number of children who do not stutter achieve great success from the Serbian language in relation to stuttering students.

Table 4. Medium values on subtests for all combinations of success in Serbian language and stuttering

| AKADIA test/subtests | grade | stuttering | | p | | grade | stuttering | | p |
		yes	no				yes	no	
Auditory discrimination (1)	4	59.58Ba	57.00Aa	**.003**	Auditory memory (8)	4	43.83Aa	43.33Aa	.721
	5	59.45Ba	58.04Aa			5	44.90Aa	47.72Aa	
Visomotor coordination and possibility of herding (2)	4	45.08Aa	50.33Ba	**.007**	The skill of creation concepts (9)	4	54.83Aa	58.00Aa	.195
	5	48.93Ab	54.62Bb			5	57.38Aa	58.74Aa	
Visual discrimination (3)	4	51.58Aa	51.33Aa	.962	Aquired language goods (10)	4	58.92Aa	60.50Aa	.888
	5	54.48Ab	54.60Ab			5	61.31Aa	60.13Aa	
Drawing shapes (4)	4	56.92Aa	60.17Ba	**.038**	Automatic language goods (11)	4	55.67Aa	59.33Aa	.141
	5	57.69Aa	62.34Ba			5	59.00Aa	60.57Aa	
Visual memory (5)	4	47.58Aa	44.00Aa	.676	Visual association (12)	4	54.17Aa	53.50Aa	.777
	5	47.76Aa	53.53Aa			5	57.83Aa	57.36Aa	
Audio-visual association (6)	4	48.92Ba	37.17Aa	**.001**	Drawing (13)	4	44.33Aa	39.00Aa	.066
	5	52.97Aa	51.34Ab			5	49.86Aa	40.92Aa	
Trace and encryption (7)	4	58.08Aa	57.00Aa	.786					
	5	58.38Aa	58.57Aa						

On the Subtest of Auditory Discrimination and Audio-Visual Association better results are achieved by students who stutter, while on the subtests Visuomotor Coordination and the Potential of Tracing and Drawing Forms better results are achieved by the children who do not stutter. On the subtest, the Audio-Visual Association there is an interaction between stuttering and success in Serbian language. If we called for a p value (p = .001), we can conclude that stuttering affects the subtest Audio-Visual Association Standard and this would apply to both groups of respondents (and with grade 4 and grade 5), while it does not affect the respondent with a score of 5.

Table 5. Connection between father's education and stuttering

| | | | Stuttering | | TOTAL |
			YES	NO	
Father - level of education	**medium**	total	29	23	59
		%	69.0%	38.3%	51.0%
	high	total	13	37	50
		%	31.0%	61.7%	49.0%
Total		Total	42	60	102
		%	100.0%	100.0%	100.0%

The χ2 independence test showed a significant relationship between stuttering and father education, χ2 (1, n = 102) = 8.138, p = .004. The majority of stuttering children have parents with secondary education.

Table 6. Meduim results on subtests for all combinations of level of father's education and stuttering

AKADIA test/subtests	Level of father's education	stuttering yes	stuttering no	p value		Level of father's education	stuttering yes	stuttering no	p value
Auditory discrimination (1)	srednji	59.00Aa	58.39Aa	.000	Auditory memory (8)	srednji	41.90Aa	45.61Aa	.500
	visoki	60.69Bb	57.57Aa			visoki	48.85Aa	48.51Aa	
Visomotor coordination and possibility of herding (2)	srednji	46.69Aa	52.09Ba	.000	The skill of creation concepts (9)	srednji	56.38Aa	58.17Aa	.131
	visoki	49.38Aa	55.38Ba			visoki	56.62Aa	58.92Aa	
Visual discrimination (3)	srednji	52.83Aa	53.78Aa	.949	Aquired language goods (10)	srednji	60.66Aa	59.74Aa	.705
	visoki	55.23Aa	54.14Aa			visoki	60.31Aa	60.38Aa	
Drawing shapes (4)	srednji	56,38Aa	63.78Aa	.003	Automatic language goods (11)	srednji	56.62Aa	60.39Aa	.149
	visoki	59.92Aa	60.97Aa			visoki	60.31Aa	60.51Aa	
Visual memory (5)	srednji	46.62Aa	55.48Ba	.020	Visual association (12)	srednji	54.93Aa	57.65Aa	.597
	visoki	50.23Aa	50.92Aa			visoki	60.62Bb	56.27Aa	
Audio-visual association (6)	srednji	50.72Aa	48.65Aa	.069	Drawing (13)	srednji	48.41Ba	39.48Aa	.012
	visoki	54.38Aa	50.35Aa			visoki	47.92Ba	41,65	
Trace and encryption (7)	srednji	55.93Aa	57.26Aa	.739					
	visoki	61.15Ab	58.89Ab						

From the table it can be seen that on the subtest Auditory Discrimination Stuttering statistically significantly increases the achievement values in children with highly educated fathers. On the Subtest Drawing, better results are achieved by children who stutter.

Non-stuttering children are more successful on the test Visuomotor coordination and possibility of herding. On subtests, Drawing Shapes and Visual memorystutter affects by reducing achievement value, and only in children whose fathers have secondary education.

Table 7. Connection between mother's education and stuttering

			Stuttering YES	Stuttering NO	TOTAL
Mother - level of education	medium	total	25	18	43
		%	59.5%	30.0%	42.2%
	high	total	17	42	59
		%	40.5%	70.0%	57.8%
Total		Total	42	60	102
		%	100.0%	100.0%	100.0%

The χ2 independence test showed a significant relationship between stuttering and father education, χ2 (1, n = 102) = 7.662, p = .006. The majority of stuttering children have parents with secondary education.

Table 8. Results of testing effects of stuttering and mother's education on AKADIA test

AKADIA test/subtests	factor		
	stuttering	mother's education	stuttering*mother's education
Auditory discrimination (1)	**.001**	.340	.415
Visomotor discrimination and the possibility of herding (2)	**.000**	**.038**	.977
Visual discrimination (3)	.844	**.030**	.620
Drawing shapes (4)	**.003**	.840	.729
Visual memory (5)	**.010**	.635	.619
Audio-visual association (6)	.233	.874	.632
Trace and encryption (7)	.738	.600	.896
Auditory memory (8)	.257	.452	.784
The skill of creating concepts (9)	.284	.088	.431
Acquired language goods (10)	.333	.249	**.023**
Automatic language goods (11)	.080	.556	.765
Visual association (12)	.602	**.020**	.329
Drawing (13)	**.003**	.160	.565

Table 8 – Results of testing effects of stuttering and mother's education on AKADIA test

From this table we can see the effect of stuttering on the subtests Auditory discrimination, Visuomotor coordination and possibility of herding, Drawing shapes, Visual memory and Drawing. The maternal education factor has a significant impact on the subtests of Visuomotor Coordination and the possibility of herding, Visual Discrimination and the Visual Association. The interaction of these two factors can be seen on the subtest Acquired linguistic treasure.

Table 9. Average of achievement on AKADIA test for experimental and control group

AKADIA test/subtests	Stuttering	AS	SD	t	p value
Auditory discrimination (1)	yes	59.520	2.051	3.410	**0.001**
	no	57.880	2.598		
Visomotor coordination and possibility of herding(2)	yes	47.520	8.211	-4.440	0.000
	no	54.120	6.732		
Visual discrimination (3)	yes	53.570	5.939	-0.410	0.681
	no	54.000	4.540		
Drawing shapes (4)	yes	57.480	8.164	-3.390	**0.001**
	no	62.050	5.485		
Visual memory (5)	yes	47.740	9.284	-2.560	**0.012**
	no	52.670	9.771		
Audio-visual association (6)	yes	51.860	6.167	1.370	0.173
	no	49.700	8.778		
Trace and encryption (7)	yes	57.550	7.510	-0.530	0.594
	no	58.270	6.056		
Auditory memory (8)	yes	44.050	13.870	-1.410	0.162
	no	47.400	10.150		
The skill of creation concepts (9)	yes	56.450	5.288	-1.730	0.086
	no	58.630	6.847		
Aquired language goods (10)	yes	60.550	6.209	0.400	0.691
	no	60.130	4.304		
Automatic language goods (11)	yes	57.760	8.153	-2080	0.040
	no	60.470	4.928		
Visual association (12)	yes	56.690	7.788	-0.070	0.941
	no	56.800	6.976		
Drawing (13)	yes	48.260	11.565	2.690	**0.008**
	no	40.820	15.102		

This table shows the mean values for all 13 subtests for stuttering. Using the t test of independent samples, it is examined whether these differences are significant. In the tests Auditory discrimination, Visuomotor coordination and the possibility of herding, Drawing forms, Visual memory, Automatic linguistic goods and Drawing, there is a statistically significant difference in mean values that was created due to the influence of stuttering. For example, in the subtype Auditory discrimination, the difference is significant (p = .001), and as the average for the group who stutter (59.52) is higher than for a group that does not stutter (57.88), this means that the presence of stutter increases the values on this subtest, as well as on the subtest Drawing, while on the tests the Visuomotor Coordination and possibility of herding, Drawing Forms, Visual Memory, and Automatic Language goodspresence of stuttering reduces mean values.

For other variables, statistically significant association was not established.

DISCUSSION

By analyzing the results of the study of the connection of intelligence and stuttering, we have come to the conclusion that there is no statistically significant link between stuttering and intelligence, p = .165 > .05. According to all parameters of descriptive statistics, students with superior intelligence achieve better results on all 13 subtests. This influence is statistically significant on subtests: Visuomotor coordination and possibility of herding, Visual discrimination, Audio-visual association, Trace and encryption, Auditory memory, Creation of concepts, Acquired linguistic goods, Automatic linguistic goods, Visual association and Drawing. On the subtype of Auditory discrimination, better results are achieved by the children who stutter.

$\chi 2$ test of independence showed a significant connection between stuttering and success in Serbian language $\chi 2$ (1, n = 100) = 4.754, p = .029. A large number of children who do not stutter achieve great success in Serbian language in relation to stuttering students. This difference is statistically significant. According to the results of the AKADIA test, it can be concluded that on the subtests Auditory Discrimination and Audio-Visual Association better results are achieved by the children who stutter, while on the subtests The visuomotor coordination and the possibility of herding and Drawing shapes are better those who do not stutter.

The results of the $\chi 2$ independence test showed a significant relationship between the level of education of the father and stutter (p = .004). More children are stuttering from the fathers with secondary education. Interpretation of achievements on the AKADIA test shows that on the subtests Auditory Discrimination and Drawing stuttering statistically significantly increases the achievement values of children with highly educated fathers. Non-stuttering children are more successful on subtests Vizuo-motor coordination and possibility of herding, Drawing Forms and Visual Memory. Stuttering reduces achievement values only in fathers with secondary education.

There was a conclusion that there is a significant link between level of education of mothers and stuttering (p = .006), where more children stutter in the group with secondary educated mothers. On subtests Auditory discrimination and Drawing better results are achieved by children who stutter, without significant influence of mother's education. On subtests, Visuomotor coordination and possibility of tracing, Drawing Shapes and Visual Memory better achievement have children who do not stutter. On the subtest, Visuomotor coordination and possibility of herding there is a statistically significant influence on mother's education, since those with highly educated mothers are more successful in both categories of children.

Observed through the achievements of the control and experimental group on the AKADIA test, the following conclusions are: that by using the t test of independent samples on the test Auditory Discrimination there is a statistically significant difference in median values that resulted byimpact of stuttering (p = .001). Average for group who stutter (59.52) is higher than for a non-stuttering group (57.88).This means that the presence of stutter increases the values on this subtest as well as on the subtest Drawing (p = .008). On the subtests, Visuomotor Coordination and possibility of herding, Drawing Forms, Visual Memory and Automatic Language goods, presence of stuttering reduces medium values (better results have non-stuttering children).

CONCLUSION

Based on the results of the research that pointed out the deviations and differences in the developmental abilities of children stuttering in relation to the children who are not stuttering, in the therapeutic work with this group of children, it is necessary to introduce a special approach and a procedure that takes into account their limitations and potentials.

This work was concerned with the analysis of those skills that are necessary for school skills (reading, writing, mathematical skills, wider success and socialization).

According to some studies, the achievements on the AKADIA test are a statistically significant factor in the success in the Serbian language. Such data confirmed the significance of this test and the justification of its application in assessing the preparedness of children of the younger school age to acquire academic knowledge and skills. Some other studies have shown that success in language teaching depends on linguistic competence, which is conditioned by cognitive potential as well as the quality of auditory information processing / auditory attention, phonological awareness, auditive discrimination, short-term and long-term verbal memory.

Difficulties in stuttering children are present in perceptual, linguistic, non-verbal and viso-motor skills. They should be the initiation of the development of a preventive and stimulating program that is part of the therapeutic process.

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VISUAL PERCEPTION OF SPEECH IN CHILDREN WITH COCHLEAR IMPLANT

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ABSTRACT

By the development and application of cochlear implants, a large number of people with hearing impairment realize a better perception of speech after implantation. The aim of the research was to determine the differences in the quality of the perception of speech of children with cochlear implant in relation to the perception modality (auditory, visual, and audiovisual). The sample consisted of 30 deaf children with a cochlear implant, both sexes, chronologically aged from 3 to 15 years old, who regularly attend or had attended rehabilitation of hearing and speaking. The Test Lingvogram and the Articulation Test were used for testing (Vuletić, 1990). The data were processed with descriptive statistics and single-factor analysis of variance. Respondents had the weakest results of word repetition and word understanding in the visual modality, much better results in auditory modality, and the best results in audiovisual modality. By comparing different modalities of speech perception, it was found that the differences were statistically significant in all pairs of modalities, both in word repetition and in word understanding, at the level of statistical significance p < .05, except between the visual and auditory perception (p = .26) in word repetition, but they were clinically significant in this combination too. The reason for the better effects of the modalities of the auditory and especially audiovisual perception, in relation to the visual perception of speech in this study is the application of cochlear implants in improving hearing and listening. However, people with a cochlear implant are still persons with hearing impairment. They should always have a high level of quality of the visual perception of speech in communication, which can be achieved by special exercises in the process of early rehabilitation of hearing and speaking.
Keywords: hearing impairment, cochlear implant, visual perception

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INTRODUCTION

Speechreading involves the visual channel of speech communication. It is a natural means of communication that we all use to supplement hearing, especially when listening conditions become difficult. It should thus come as no surprise that all people with hearing impairments must rely on speechreading to a greater or lesser extent (Ross, Brackett, & Maxon 1982, see Gelfand, 2016, p. 433). Speechreading as used here means using the visual clues of the speaker's lip and facial movements, gestures, posture and body language, along with residual hearing to make use of the speaker's verbal communication, intonation and context to infer meaning (formerly known as lip reading). Speechreading is used by persons with typical hearing and those with hearing loss, especially when there are communication challenges such as background noise, and is an integral part of speech processing ("Speechreading", 2016).

By people with a standard hearing the role of visual perception, of the voice signal in understanding the voice message in the noise, in reverberation, and even in situations where the speech signal can be heard well, but is difficult to understand because of linguistic or content complexity, is more significant than is usually thought. In cases where, due to noise or reverberation, the voice signal cannot be heard well, the possibility of its visual perception, with dominant audible perception, significantly improves the understanding of speech of people with standard hearing (Bradarić-Jončić, 1997).

The role of hearing and speech rehabilitation for a deaf child is extremely important. It is very important to raise the ability of visual speech perception through exercises carried out by a well-trained expert. If the child carrying the device is found in conditions of hearing deprivation, e.g. due to technical problems or problems of some other kind, it will always have good support for visual perception, developed through these exercises.

By the development and application of cochlear implants, a large number of people with hearing impairment realize a better perception of speech after implantation.

According to Spencer (2016, p. 13), data about language development using CIs have become available on larger numbers of children (Nicholas & Geers, 2007, 2008; Niparko et al., 2010), and outcomes are more positive as technology improves and age of implantation decreases. A number of factors beyond age of implantation have been implicated in spoken language outcomes (e.g., Niparko et al., 2010; Nittrouer,

2010; Spencer, 2004), and reports continue of great variability (e.g., Tobey et al., 2013). However, other characteristics and experiences being roughly equal, it has been well established that children with early use of CIs generally outperform those with the same degree of hearing loss who use only hearing aids—or who did not use CIs until later ages. In fact, Tobey et al. reported a general consensus that children who receive CIs by 18 months of age develop better spoken language skills, on average, than those implanted later.

According to Kral (2013, p.7), recent studies indicate the superiority of outcomes of even earlier implantation (within the first 18 months; De Raeve, 2010; Niparko et al., 2010; Yoon, 2011). These results emphasize that the eventual goal should be to use prosthetic devices such as cochlear implants to provide children with hearing as early as possible. Effective communication before implantation has been shown to be a predictor of the success of postimplantation communication (Tait et al., 2000).

A summary measure of the advances being made in language development was provided by Goberis et al. (2012), according to Spencer (2016, p.13), who noted that DHH children with high-quality early intervention and without complications of limited cognitive abilities or significant multiple disabilities can develop language at a rate of about 80% to even 100% of that of hearing children. Previously, this rate (even in the best of conditions) was about 45%–65%. In addition, evidence is accruing that, unlike for previous generations, the faster rate of development may be being maintained through older ages instead of leveling or even dropping at adolescence in some domains.

While cochlear implants work and appear to work well for many profoundly deaf adults and children, they do not always provide benefits to all patients who receive them. Compared to other behavioral data I have seen in the field of speech perception and spoken word recognition over the years, the audiological outcomes and benefits following cochlear implantation were simply enormous and hard to fully understand at first glance. Some deaf adults and children do extremely well with their cochlear implants and display what initially appears to be near-typical speech perception and language skills on a wide range of traditional clinical speech and language tests when tested under quiet listening conditions in the laboratory. In contrast, other adults and children struggle for long periods of time after they receive their cochlear implant and often never achieve comparable levels of speech and language performance or verbal fluency (Pisoni, 2004, p.134).

During rehabilitation procedures, the visual perception of speech, regardless of the system of communication that is adopted, and especially if oral speech is adopted, requires a special approach.

Deaf and hard-of-hearing people should always have a high level of visual perception of speech in communication, regardless of chronological age, and this can be achieved by special exercises in the process of early rehabilitation of hearing and speaking. Methods that influence the better visual perception of speech, in the earlier period, before the appearance of cochlear implants, were extremely represented. With the installation of cochlear implants, it is noticeable that the visual perception of speech, especially the application of these methods, begins to be ignored.

The aim of the research was to determine the differences in the quality of the perception of speech of children with a cochlear implant compared to the modality of speech perception.

WORK METHODS

Sample respondents

The sample of respondents consisted of 30 deaf children with cochlear implant, both sexes, chronologically aged from 3 to 15, who regularly attend or had attended rehabilitation of hearing and speaking.

Measuring instrument

In order to determine the quality of visual perception of speech, that is, the examination of elementary speech-linguistic abilities (direct repetition of the word - articulation of voices and word understanding), the modified and mutually combined Test Lingvogram (Kostić, Vladisavljević, Blagojević, 1983) and Articulation Test (Vuletić , 1990) were used.

The first part of the examination was conducted in such a way that the examiner followed the repetition of the word and the pronunciation of the examinees' voices when he names a certain term in the Lingvogram images, after perceiving the word from the examiner through three modalities of perception: auditory (the examiner covers the face while speaking), visual (the examinee removes the hearing instrument or the processor of the cochlear apparatus and lip-reads the speech of the examiner) and audiovisual (the examinee uses a hearing aid and looks at the examiners' lips).

For each word, responses are recorded (exactly repeating words, substitution, distortion, and voice omis-

sion), and then the summary result is entered in the appropriate form. Subsequently, the Articulation Test (Modified Test Form by Vuletić, 1990), from which the norms for assessing the articulation of voices were taken, was used to calculate the total damage of articulation (percentage value). Sample variables for this part of the test: word repetition and articulation damage.

The second part of the examination was carried out in such a way that the examiner names an image of a particular concept from the Lingvogram, and the examinee shows it, provided that the perception of the speech by the examinee, or the examination, also took place individually, through three different modalities (auditory, visual or audiovisual).

For each term or word, the response (correctly or incorrectly understanding the word) was recorded in the appropriate form and in the end the total number of responses was summed. The variable used to estimate the quality of visual perception of speech in this research was the word understanding.

Data processing methods

The data is processed in the SPSS for Windows program. The basic statistical parameters are calculated: the minimum and maximum results, the sum, the arithmetic mean, and the standard deviation. Single-factor variance analysis of repeat measurement (ANOVA) was applied in comparing data on the quality of perception in three different modalities (visual, auditory, audiovisual). For the multiple comparisons of data from different modalities of speech perception, the Bonferroni test for adaptation was used.

RESULTS AND DISCUSSION

Respondents had the weakest results of word repetition and word understanding in visual modality, much better results in auditory and best results in audiovisual modality. The average value of the repetition of the word perceived by the visual modality of perception was 38.07 ± 23.00, the audible 44.90 ± 25.48, and the audiovisual modality of 50.73 ± 25.49 words, of a total of 90 words.

Total articulation damage was on average 10.84 ± 11.84.

The average value of word understanding perceived by the visual perception modality was 52.90 ± 21.89, by the auditory 62.17 ± 19.68, and by the audiovisual modality 63.97 ± 19.31 words, also, of a total of 90 words.

Table 1. Basic statistical parameters

	N	MIN	MAX	M	SD
Word repetition – visual	30	5.00	88.00	**38.07**	23.00
Word repetition – auditory	30	12.00	90.00	**44.90**	25.48
Word repetition – audiovisual	30	12.00	90.00	**50.73**	25.49
Oštećenje artikulacije (%)	30	.06	43.00	**10.84**	11.84
Word understanding – visual	30	.00	87.00	**52.90**	21.89
Word understanding – auditory	30	9.00	89.00	**62.17**	19.68
Word understanding – audiovisual	30	10.00	89.00	**63.97**	19.31

The analysis of the variance of the repeated measurements determined a statistically significant difference between the group mean values and for the word repetition (Wilks' Lambda = .57; F (2.28) = 10.73; Partial eta squared = .43) and for the word understanding (Wilks' Lambda = .52; F (2.28) = 13.04; Partial eta squared = .48), at the level of statistical significance p < .05 (Table 2). Given the amounts of partial eta squares, it can be concluded that a statistically significant difference in the quality of speech perception is determined by the great influence of the different perception modalities.

Table 2. Multivariate Test

	Wilks' Lambda	F	df	Error df	*p*	Partial Eta Squared
Word repetition	.57	10.73	2	28.00	.00	.43
Word understanding	.52	13.04	2	28.00	.00	.48

With multiple comparison of data from different modalities of speech perception, with Bonferroni adjustment, it is possible to notice that differences are statistically significant in all modality pairs both in word repetition and in word understanding, at the level of statistical significance p < .05, except between visual and auditory perception (p = .26) of the word repetition, but are clinically significant in this combination too (Table 3).

Table 3. Pairwise Comparisons

	Perception (I)	Perception (J)	Mean Difference (I-J)	*p*
Word repetition	Visual	Auditory	-6.83	.26
		Audiovisual	-12.67	**.00**
	Auditory	Visual	6.83	.26
		AAudiovisual	-5.83	**.00**
	Audiovisual	Visual	12.67	**.00**
		Auditory	5.83	**.00**
Word understanding	Vizuelna	Auditory	-9.27	**.02**
		Audiovisual	-11.07	**.00**
	Auditory	Visual	9.27	**.02**
		Audiovisual	-1.80	**.00**
	Audiovisual	Visual	11.07	**.00**
		Auditory	1.80	**.00**

The reason for the better effects of the modalities of the auditory and especially audiovisual perception, in relation to the visual perception of speech in this study is the application of cochlear implants in improving hearing and listening, which cannot be achieved using classical hearing aids in subjects with this degree of hearing impairment.

According to Bergeson, Pisoni and Davis (2003, p. 348), in one of the first studies of AV speech perception in children with cochlear implants, Staller et al. (1991) administered the Word Intelligibility by Picture Identification (Lerman, Ross, & McLauchlin, 1965) closed-set test of spoken word perception to 8-year-old children, and the Central Institute for the Deaf (Davis & Silverman, 1978) open-set test of sentence perception to 12-year-old children. The children received cochlear implants at a mean age of 9.2 years and all children had used their cochlear implants for at least 1 year. Most, but not all, of the children were prelingually deafened. Children in both age groups performed better in the AV condition compared with a lipreading-alone (visual-alone, or V-alone) condition, revealing that they benefited from the additional auditory information provided by their implant. However, because the investigators did not administer these tests in an auditory-alone (A-alone) condition, it is possible these children would have performed equally well in the AV condition and an A-alone condition.

They also state that more recent studies of AV speech perception in children with prelingual hearing loss who received cochlear implants at younger ages than children in the Staller et al. (1991) study have administered speech perception tests under three presentation conditions: A-alone, V-alone, and AV (Geers et al., 2003; Lachs et al., 2001; Tyler, Fryauf-Bertschy, et al., 1997). In the Tyler, Fryauf-Bertschy, et al. (1997) study, two separate groups of children completed the Audiovisual Feature Test (Tyler, Fryauf-Bertschy, & Kelsay, 1991), a closed-set test of consonant feature recognition, at 2 and 4 years post-implantation. The results showed that performance was better in the AV presentation condition compared with the A-alone and V-alone conditions, regardless of the consonant feature.

According to Geers, Brenner, and Davidson (2003), children, who received a cochlear implant under 5 yr of age, achieved an average level of about 40% speech recognition through lipreading alone, 50% through listening alone and about 80% speech recognition through lipreading and listening together. Their auditory perception of speech features corresponded to 80% correct perception of vowels and 60% correct perception of consonants, which is roughly equivalent to that of a severely hearingimpaired child using hearing aids (Boothroyd & Eran, 1994).

Bergeson, Pisoni and Davis (2003, p.347) the investigated the development of audiovisual speech perception skills in children who are prelingually deaf and received cochlear implants. Thay analyzed results from the Pediatric Speech Intelligibility (Jerger, Lewis, Hawkins, & Jerger, 1980) test of audiovisual spoken word and sentence recognition skills obtained from a large group of young children with cochlear implants enrolled in a longitudinal study, from pre-implantation to 3 years post-implantation. The results revealed better performance under the audiovisual presentation condition compared with auditory-alone and visual-alone conditions. Performance in all three conditions improved over time following implantation. The results also revealed differential effects of early sensory and linguistic experience. Children from oral communication (OC) education backgrounds performed better overall than children from total communication (TC backgrounds. Finally, children in the early-implanted group performed better than children in the late-implanted group in the auditoryalone presentation condition after 2 years of cochlear implant use, whereas children in the lateimplanted group performed better than children in the early-implanted group in the visual-alone condition. The results of the present study suggest that measures of audiovisual speech perception may provide new methods to assess hearing, speech, and language development in young children with cochlear implants. The relationships observed between auditory-alone speech perception, audiovisual benefit, and speech intelligibility indicate that these abilities are not based on independent language skills, but instead reflect a common source of linguistic knowledge, used in both perception and production, that is based on the dynamic, articulatory motions of the vocal tract. The effects of communication mode demonstrate the important contribution of early sensory experience to perceptual development, specifically, language acquisition and the use of phonological processing skills. Intervention and treatment programs that aim to increase receptive and productive spoken language skills, therefore, may wish to emphasize the inherent cross-correlations that exist between auditory and visual sources of information in speech perception (Lachs, Pisoni, & Kirk, 2001).

CONCLUSION

By the development and application of cochlear implants, a large number of people with hearing impairment realize a better perception of speech after implantation.

However, the fact is that listening and hearing with hearing aids is not a natural process. People with a cochlear implant may suddenly, for various reasons (eg, the processor stops working), find themselves in conditions of hearing deprivation. They are thus still people with hearing impairment, and if there is no auditory perception, the ability of visual perception in communication then becomes significant.

Examination of its quality and role in the communication of children with cochlear implant is an important segment of monitoring and knowledge, both for providing adequate support in its development and as an important scientific and research issue.

This research showed that respondents had the weakest results of word repetition and word understanding precisely in visual modality, much better in auditory modality, and the best in audiovisual modality. A statistically significant difference was found in all pairs of perception modalities, both in word repetition and in word understanding, except between visual and auditory perception in the word repetition, but they were clinically significant in this combination too. Therefore, in the early development period, in addition to exercises for the development of auditory perception, intensive exercises are needed to improve the visual perception of speech as well.

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CLINICAL PROTOCOL FOR APHASIA AND APHASIA TEAM

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Professional paper

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ABSTRACT

The Clinical Protocol for Aphasia was created on the basis of international scientific research and presented to the professionals in this field at the First Congress of the Speech and Language Pathologists of Serbia. The Protocol, whose character is diagnostic-prognostic, is multidimensional in its structure containing five axes of assessment. Its greatest value is that it aims at realistic goal setting in the rehabilitation therapy of aphasia.Communication is the key to social participation and the objective of the rehabilitation of aphasia is a social goal, i.e., the optimization of communication between aphasia patientand their environment.The imperative of the protocol is interdisciplinarity, so one of the protocol outcomes is the aphasia team. The aphasia team is characterized by interdisciplinarity, functionality, flexibility and dynamism. One of the outcomes of the application of the Clinical Protocol for Aphasia is the choice of treatment: approach to leading disorder, functional approach, and social approach.
Key words: aphasia, protocol, aphasia team, treatment

INTRODUCTION

In an attempt to raise the level of health services to a higher level by exploiting professional resources acquired through a system of continuous education (specializations, master studies, doctoral studies, and technological innovations), patients with communication disorders, disturbances and accompanying cognitive deficits resulting from neurological diseases are provided with better and more efficient treatment. This can be achieved in specialized medical institutions whose main activity is speech pathology such as the Institute for Psychophysiological Disorders and Speech Pathology containing both professional and technical-spatial resources (experts, policlinics,dispensaries and infirmaries), as well as in other centers for the rehabilitation of neurological patients and clinical-hospital centers in Serbia.

The Institute for Psychophysiological Disorders and Speech Pathology has been conducting rehabilitation therapies of aphasia patients for more than two decades.The rehabilitation therapies havebeencarried out within the Department of Aphasia via individual policlinictherapeutic procedures andinfirmary treatment. Individual treatment is continuously performed twice a week by combining speech and cognitive therapy. Therapeutic procedures are conducted by professionals who have mastered skills and knowledge in the field of communication science, neuropsychological techniques and sociotherapy approaches (Čauševac, 2009).

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Following the requirements of contemporary science and profession in the field of communication sciences and disorders, and neurocognitive sciences, we have adopted and applied in practice the clinical protocol for aphasia-Multi Axial Aphasia System (MAAS) protocol (Sandt-Koenderman, 2007).

Clinical Protocol for Aphasia (MAAS) was presented to the professional and scientific public at the first Congress of the Speech and Language Pathologists of Serbia (Čauševac & Oljača, 2012).

We are fully aware of the fact that "protocols" are a reflection of professional and scientific accomplishments in a certain period of time, and are consequently subject to change and innovation obliging professionals to follow them.

The Content of the Clinical Protocol for Aphasia

"The Multi-axial Aphasia System (MAAS) was developed to structure linguistic, somatic, neuropsychological, psychosocial and socio-economic information on five separate axes, enabling an explicit and interdisciplinary process of clinical decision-making. The objectives of this study were to investigate the potentialities of MAAS in predicting the outcome of cognitive-linguistic treatment" (van de Sandt-Koenderman et al., 2008). MAAS - Multi-axial Aphasia System aims at realistic goal setting in the rehabilitation therapy of aphasia taking into consideration that communication is the key to social participation while the objective of the rehabilitation of aphasia is a social goal, i.e., the optimization of communication between patient and their environment.

The Clinical Protocol for Aphasia (MAAS) consists of:

-patient's general data: birth year, sex, education, place of residence; hospitalization; time of occurrence and cause of stroke; localization and lateralization;

-somatic information, such as: type of stroke, size and location of the lesion; CT / MRI; comorbidity;

-neuropsychological information: attention, concentration, verbal and non-verbal memory, semantic reasoning and executive functioning;

-psychosocial information: emotional disposition; motivation and psychological stressors;

-socio-economic status of patients: education, former profession, place of residence, social integration, hobby, etc.

The Clinical Protocol for Aphasia leads us to all the necessary diagnostic procedures,and these are in the first place:

- Linguistic assessments; the Clinical Protocol recommends the Boston Diagnostic Aphasia Examination, fluency tests, Token test;
- Neuropsychological examinations are conducted via neuropsychological diagnostic tests (forgeneral intellectualability, attention, and executive functions (TMT, Wisconsin Card Sorting Test), visuospatial and visuomotor functions, memory, behavioral tests and personality tests.

The value of the Clinical Protocol is its characteristic that interdisciplinarity is an imperative. The MAAS protocol includes five disciplines, i.e.the aphasia treatment team consists of five professionals. They are aphasiologist (dealing with clinical linguistics), neurologist (dealing with behavioral neurology), neuropsychologist, speech and language pathologist, and rehabilitation medicine consultant.The structure of involved professionals established by the MAAS protocol guarantees the achievement of the set goals of the treatment.

The MAAS Protocol is both diagnostic and prognostic. It is structured in five axes.

The first axis (or the vertical one) refers to linguistic information on the type and weight of aphasia, the nature of phonological and semantic disorders, and the quality of verbal communication. Linguistic assessment is crucial but not sufficient. The second axis refers to somatic information found by neurological/ neuroimaging, functional and diagnostic assessment. This axis provides information information on type of stroke, size and localization of the lesion, its localization, CT/ MRI and comorbidity (Basso, 1992).

Important neuropsychological information is obtained from the third axis of the protocol. These are pieces of information on attention, concentration, verbal and non-verbal memory, semantic judgment and executive functioning.The fourth axis of the Protocol provides psychosocial information about the psycho-emotional disposition of patients with aphasia, motivation and psychological stressors that can have an impact on the effects of treatment.

Socio-economic data are obtained from the fifth axis of the Protocol and relate to the social circumstances of patients with aphasia such as education, occupation, housing, social environment (networking), hobbies, etc.

Upon completion of individual assessments by five professionals, the aphasia treatment team meets in order to analyze the obtained information and the overall MAAS profile.

The MAAS profile indicates the direction and goals of the treatment. According to the ICF model (The International Classification of Functioning, Disability and Health),the three corresponding types of treatment can be distinguished: approach to leading disorder; functional approach and social approach.

The approach to leading disorder has the goal of restoring linguistic processes via cognitive-linguistic treatment, thus achieving the first principle of communication rehabilitation, remediation. Functional approach directs us to functional communication in everyday life. It may include teaching patients to use residual language skills as effectively as possible, and/or to use augmentative and alternative communication strategies such as gestures, use of communication books or other communication tools to compensate for linguistic deficit, thus achieving the principle of compensation and education.

Within the social approach, the focus is on life with the consequences of aphasia, taking into consideration that a patient with aphasia is at risk of social isolation (the principle of participation).

The social goal is accomplished by means of the constant support that a patient receives from the therapist during rehabilitation therapy. Participation is achieved through communication with family and friends, participation in self-help groups, other support groups and recreational activities.

The Aphasia team is both diagnostic and therapeutic in its character. It is also functional, while its particularity is flexibility and dynamism. Itsactivities are policlinic-dispensary and infirmary/hospital. Policlinic and dispensary work includes diagnostic and consultative protocol procedures, team meetings and some therapeutic procedures. Infirmary activity of the team members is the application and guidance of therapeutic procedures.

Since functionality is one of the Aphasia team's characteristics, it is not uncommon to involve other experts (psychiatrists, occupational therapists, experts in social rehabilitation, etc.)in both diagnostic process and treatment outcome (Lazić & Čauševac, 2010).

CONCLUSION

The Clinical Protocol for Aphasia provides good guidance of adiagnostic process and a proper choice of treatment.It should be noted that although linguisticassessment is crucial, it proved to be insufficient for planned treatment of patients with aphasia.Only an interdisciplinary assessment can predict the outcome of a cognitive-linguistic treatment. Therefore,the attention should be paid to cognitive factors in the rehabilitation therapy of aphasia, taking in consideration the latest research from University of Pennsylvania, Department of Communication Sciences and Disorders, which argues that aphasia is not just a language disorder (Sandberg, 2017). This approach prevents patients and therapists from struggling with unsuccessful cognitive-linguistic therapy.

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INDIVIDUAL EDUCATION PLAN (IEP) FOUNDATION OF A QUALITY INCLUSIVE EDUCATION

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ABSTRACT

Children with disability deserve equal access to quality education which enable them develop into useful member of the society and contribute to the economic growth of their immediate community irrespective of their areas of special needs. The Individual Education Plan (IEP) is a written document specifically developed for students with disabilities in inclusive education. The main goal of this article is to present a checklist of the essential elements required for an IEP and it is intended that these will form the basis for good inclusive practicein the future. The IEP is a working document and should be useful, available and comprehensible to all those dealing directly with the student. It needs to be considered in the context of home, school and classroom organisation.Effective individual education plans have key characteristics: Individualised and child-centred, Inclusive, Holistic, Collaborative and Accessible.
Key words: Individual Education Plan (IEP , inclusive education, collaboration, individualization

INTRODUCTION

Inclusive education is a process of strengthening the capacity of the education system to reach out to all learners and can thus be understood as a key strategy to achieve Education for All (EFA) – educational systems that would benefit from differences, in order to build a more just, democratic society (Acedo, 2008). As an overall principle, it should guide all education policies and practices, starting from the fact that education is a basic human right and the foundation for a more just and equal society. The major impetus for inclusive education was given at the World Conference on Special Needs Education: Access and Quality, held in Salamanca, Spain, June 1994 (UNESCO Report, 1994). Thus, the fundamental principle of inclusive education implies respect of diversity in human society and includes identification, challenge and overcoming barriers in participation, caused by the social, cultural, ideological and physical factors (Jachova, 2004).

This vision was reaffirmed by the World Education Forum meeting in Dakar, April 2000, held to review the progress made since 1990.

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The Forum declared that Education for All must take account of the needs of the poor and the disadvantaged, including those with disabilities or special learning needs. Inclusion is thus seen as a process of addressing and responding to the diversity of needs of all children, youth and adults through increasing participation in learning, cultures and communities, and reducing and eliminating exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision that covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children (UNESCO, 2003b).

Inclusive schools have to be well-equipped in all aspects to cater and deliver quality education for all children. This includes having a balanced curriculum that is appropriate for all categories of children, teachers who have the ability to handle the individual needs within the classroom and thereby promote an environment where personal development, social skills and student participation are strongly encouraged (Jacob&Olisaemeka, 2016, p.192)There is a growing recognition that including students with disabilities in general education can provide them with the opportunity to learn in natural, stimulating settings, which may also lead to increased acceptance and appreciation of differences (Ajuwon, 2008).Creating a learning environment for inclusive classrooms that is well managed with clear structures and routines is of the utmost importance for student success "School must be a safe and protected environment, where a student can come and learn without fear" (Wong & Wong, 2014, p. 11)

Effective educational system should respond to the needs of children who need an organised support from the community, educational institutions and society as a whole, in order to achieve the guaranteed right to accessible and quality education under equal conditions. Creation and maintenance of inclusive culture in school environments is a process, especially because the inclusion itself requires transformation of attitudes of people, schools, the system and the society as final (Jachova, 2008).

COLLABORATION IN INCLUSIVE EDUCATION

An important role in supporting inclusive education is therefore played by teamwork, exchange of experiences, partnership in schools and developing positive relationships between all educational actors (Mărgăriţoiu,

2010). This means that "all team members need to know what should be achieved jointly, and be given clear information on what can be solved collectively. Researchers have highlighted various obstacles – both structural and cultural in nature – to collaboration between professionals from different sectors of society. In a review of the relevant literature, Widmark et al. (2011, p. 2) stressed that "the structural barriers include differences in the regulatory, financial, and administrative boundaries, and the cultural impediments consist of the various ways that the needs of individuals are considered, which are often a product of educational and organisational cultures." Rose (2011) has identified problematic power dynamics, poor communication patterns, and a poor understanding of roles and responsibilities as obstacles to successful interprofessional collaboration, resulting in boundary infringements and conflict due to differences in approaches. Igrić (2015, p. 302) points out the problem of lack of expertise in assessing and providing support to children with disabilities in elementary schools, which leads to a lack of understanding of the child's needs, to the denial of the right to development and education under the same conditions as their peers.

If mainstream teachers do not accept the education of these pupils as an integral part of their job, they will try to ensure that someone else (often the special education teacher) takes responsibility for these pupils and will organize covert segregation in the school (e.g. the special class) (Mutasa, Goronga, & Tafangombe, 2013). Salisbury (1994, by Atta et al., 2009, p. 281) suggested that "collaborative problem solving to promote inclusive education is typically carried out between teachers and other support professionals who get together to solve specific problems, usually concerning a student or group of students, focusing on classroom-based interventions increases the students' chances for success (Bouillet, 2013, p. 97)."

Teachers' positive attitudes towards inclusion depend strongly on their experience with learners who are perceived as 'challenging'. Teacher education, the availability of support within the classroom, class size and overall workload are all factors which influence teachers' attitudes. Negative attitudes of head-teachers, inspectors of education, teachers and adults (parents and other family members) are major barriers to inclusion. Teachers, other educators and non-teaching support staff need to be trained and ready to assist children, youth and adults in their development and learning processes on a daily basis (UNECSO, 2009).

Collaboration with the parents is very important for the progress in the process of education.

The parents have to be involved in the all phases like identification of the special needs, assumption specific educational utility till Comission evaluation. A well thought and established partner relation between teacher and parent is a solid ground for gradual raise of the quality of educational work in those segments that are accessible for the parents and the students and it should be nourished and consistently promoted (Jachova, 2011, p. 452).

The SEND Code of Practice is underpinned by a number of principles made explicit in Section 19 of the Children and Families Act 2014 whereby regard must be given to: the importance of the child or young person, and the child's parents, participating as fully as possible in decisions, and being provided with the information and support necessary to enable participation in those decisions; the need to support the child or young person, and the child's parents, in order to facilitate the development of the child or young person and to help them achieve the best possible educational and other outcomes, preparing them effectively for adulthood (Frederickson & Cline, 2015, p. 60). One of the priorities in education policy framework refers to the improvement educational system through the provision of a quality, equality, fairness and accessibility of education for all students according to their abilities and skills. Index for Inclusion offers schools a supportive process of self-assessment and development, which draws on the views of staff, governors, students and parents/carers and other community members. Index includes detailed study of ways by which to reduce barriers to learning and participation of all students in the school (Jachova, & Kovachević, 2015, p. 901).

PREPEARING EFFECTIVE INDIVIDUAL EDUCATION PLAN (IEP)

This appropriate education is implemented through each child's Individualized Education Plan (IEP), the legal document in which parents and school personnel determine specific supports and services the student will need to access general education. This IEP process is one of the most powerful aspects of the student's education and therefore the IDEA mandates that parents are equal members in the creation of the IEP (Yell 2012). The Individual Education Plan is developed through a collaborative process involving the school, parents, the student (where appropriate) and other relevant personnel or agencies. It refers to the adapted or modified aspects of the educational programme and focuses on priority learning needs, although the student may also have other learning needs that will not require the same intensive degree of planning and monitoring. Not every aspect of

the curriculum and school life needs to be modified for every student with special educational needs - only those areas of identified need arising from assessment should be covered. The amount of adaptation and support will vary according to the individual learning needs of each student. Some students with more complex needs may require significant educational modifications (NCSE Report, 2006, p. 4).The five strongest points of the IEP (individual education plans) are: based on the true knowledge of the student;they are made according to the true abilities and interests of the students;predict real time limits;related to the resources of the school; andat a certain stage of their work include parents (Jachova, 2002, p. 8).

IEP learning outcomes are often described as goals and objectives. An IEP must have one or more of the following: the goals or outcomes set for that student for that school year where they are different from the learning outcomes set out in an applicable educational program guide; a list of the support services required to achieve goals established for the student; a list of the adaptations to educational materials, instructional strategies or assessment methods. An IEP should also include the following: the present levels of educational performance of the student; the setting where the educational program is to be provided; the names of all personnel who will be providing the educational program and the support services for the student during the school year; the period of time and process for review of the IEP; evidence of evaluation or review, which could include revisions made to the plan and the tracking of achievement in relation to goals; and plans for the next transition point in the student's education.(BC Ministry of Education Manual, 2016, p.16)

In Serbia the individual educational plan contains: personal data and a brief description of the development and educational situation of the child or pupil; the goal of educational work orchange that needs additional support should be achieved in a subsidiary where additional support is planned, operational description of the support through a series of individual activities or steps and their order in the educational group and classes in the department, as well as the description and schedule of work outside the group or classes when it is necessary; specific attainment standards and adapted standards for particular activities in pre-school institutions, for particularor all subjects in schools or outgoing activities that go through a process to the next additional support;persons who will provide support during realization of individual planned activities, he timing, duration, or frequency for each support measure during the planned activities (Pavković & Kovačević, 2017).

Where it is decided to provide a pupil with SEN support, the parents must be formally notified, although parents should have already been involved in forming the assessment of needs as outlined above. The teacher and the SENCO should agree in consultation with the parent and the pupil the adjustments, interventions and support to be put in place, as well as the expected impact on progress, development or behaviour, along with a clear date for review. All teachers and support staff who work with the pupil should be made aware of their needs, the outcomes sought, the support provided and any teaching strategies or approaches that are required. This should also be recorded on the school's information system. The support and intervention provided should be selected to meet the outcomes identified for the pupil, based on reliable evidence of effectiveness, and should be provided by staff with sufficient skills and knowledge. Parents should be fully aware of the planned support and interventions and, where appropriate, plans should seek parental involvement to reinforce or contribute to progress at home. (SEN and disability Code of practice: 0 to 25 years, 2015, 101).

In Republic of Macedonia there is no system solution for adapting the IEP according to the abilities of the children with disabilities, based on the barriers that have to be conquered, it is prepared with an agreement between the parent and the teachers. Accurate information therefore cannot be obtained of whether the children receive the best education according to their abilities and whether they are motivated to reach their full potential. Although the majority of the parents are satisfied with the results achieved at school, almost all of them believe that it is a result of the additional work that the parents invest with these children in the home (Report of Ombudsmanin Republic of Macedonia, 2016, p. 45).

The IEP should only record that which is additional to or different from the differentiated curriculum plan, which is in place as part of provision for all children. The IEP should be crisply written and focus on three or four individual targets, chosen from those relating to the key areas of communication, literacy, mathematics, and behaviour and social skills that match the child's needs. The IEP should be discussed with the child and the parents (SEN Code of Practice, 2001).

In Croatia after the designed student support plan and setting those goals aimed at student progress, special education teacher provides support in developing an individual educational program (IEP). The form of IEP (Ivančić & Stančić, 2015) encompasses initial assessment, curriculum areas and topics to be taught by student, goals to be adopted, student activities, support strategies, accomplished tasks, reports on co-operation with parents, teaching assistants, progress report and suggestions for further work. Special education teacher and student's teacher agree on a work plan. After providing support in writing and implementing IEP, special education teacher, a mobile expert team member arranges meetings with teachers, parents and teaching assistants to establish a student's progress for further assignments and plans. An example of good practice are meetings of teachers, teaching assistants, parents, and members of a mobile expert team. At that meeting, a member of a mobile expert team is the leader of the meeting and moderates it by directing the participants to what is important and by gathering information and giving advice on progress.

The perceptions from the experiences so far show that the IEP should:are considered working documents; be of interest to all interested parties; promote effective planning by teachers;be the result of serious preparations and action by staff and lead to the achievement of certain learning objectives;enable inclusion in the assessment of the success of all students in the school, including students with SEN (special educational needs);provide access to the curriculum and efficient realization of the content;are linked to the school's strategy (Jachova, 2013, p. 18).

Individual Education Plan (IEP) for deaf pupils should enable: teacher of the deaf staff to identify the approximate number of sessions needed by particular pupil for tutorial work with the teacher for deaf; the pupil to be involved in target setting and reviews where appropriate; mainstream teachers and teachers of the deaf to jointly plan the programme of lessons; parents of deaf pupils to be regularly informed about progress, difficulties and/or strategies recommended for their child; parents to contribute insight the knowledge of and aspirations for their child in drawing up of the IEP (RNID Education Guidelines, 2001, p. 19).

In Serbia IEP is developed according to the educational needs of the child and the student: adaptation of the way of work, as well as the conditions in which the educational work is performed (IEP1);the adaptation and modification of the content of the educational work, the outcomes and the standards for achievement (IOP2);enriching and expanding the content of educational work for talented children and students (IOP3). The preparation of IEP2 precedes the preparation, application and evaluation of IEP1, as well as providing an opinion from an interdepartmental commission to assess the need for additional education, health and social support for the child and the student.

In particular, for students who acquire education through the implementation of IEP2, the curriculum can be changed, based on the opinion of the interdepartmental commission for assessment of the need for additional education, health and social support for the child and the student (Kovačević & Arsić, 2017). According of the Report of Ombudsman in Republic of Macedonia (2016, p.46) the IEP, prepared by the parent, teacher, pedagogue and the special education teacher. The IEP highest goals are set for one trimester and if the child is successful in achieving these goals in the foreseen period, then they are upgraded by setting even higher goals for the next three months. If the set goals are not achieved in the foreseen period, in accordance with the abilities of the child with disabilities, then they are downgraded for the next three months. The evaluation is a separate problem, according to both the teachers and the parents. Once again, the teachers insist on the existence of standardized templates that will allow them to evaluate the children with disabilities, rather than giving a grade which measures the acquisition of knowledge and skills. Both the teachers and the parents perceive evaluation and all types of testing, the external testing as well, as a separate issue in the process of inclusion. according to the teachers, the approach to adjusting the testing is individual and situational.

IEPs should be reviewed at least twice a year. Ideally they should be reviewed termly, or possibly more frequently for some children. At least one review in the year could coincide with a routine Parents' Evening, although schools should recognise that some parents will prefer a private meeting. Reviews need not be unduly formal, but parents' views on the child's progress should be sought and they should be consulted as part of the review process. Wherever possible, the child should also take part in the review process and be involved in setting the targets. If the child is not involved in the review, their ascertainable views should be considered in any discussion (SEN Code of Practice, 2001, p.54).

Accordingly, it is clear that should pay particular attention to IEP and anticipate their strategic role in schools. However, it is necessary to clearly specify the basic content of the IEP, define the relationship between the IEP and the planning of curriculum content, to provide teacher education in order to help the student progress to clearly defined goals in education, to pay attention how the action plans of the school fit into strategies related to inclusive practice. The success of IEP is undoubtedly dependent on the environment in which effective and detailed planning exists as a segment of the overall assessment and recording strategy. The main objective of the IEP is to indicate what needs to be done in the near future to help the student and the inclusive team achieve success.

Accordingly, it can be used in the procedures of the local institutions for providing documentation during revision. However, their main goal remains to be a way to help teachers and students strive to achieve the key goals in the learning process. Finally, we can conclude that IEPs contribute to raising the standards of students with SEN (special educational needs) and maintaining the positive climate in inclusive practice.

CONCLUSIONS

Inclusion is arranged through network coordination and persons centred system.Support of parents of children with SEN enable increased active participation of inclusive educational access and higer standards for all children. Inclusion involves different participation of the individual or the group in the social processes, respecting the difference, the individual possibilities and desires (Jachova & Stojkovska Aleksova, 2013, p.13).The responsible inclusion means net creating for coordination between the involved parties; Establishing a system of mobile special teachers' net; Well-designed IEPs; Development of service for expertise and supervision; Overcoming of architectonic barriers (Kovachević, & Jachova, 2015, p. 935). According to Bartolo, Blake and Jachova (2007), the structure for a successful inclusion underlines:appropriate support and specialized services for the pupils,well designed IEP,professional development of the teachers in the regular and special education,time for the teachers for planning, meetings, creativity and evaluation of the pupil with all team members,reducing classes and precise the pupil's needs,professional development of skills in the frames of cooperative learning, peers tutoring, curriculum adaptation, different learning styles, cooperation between parents and teachers (Jachova, 2011, p. 456).

The IEP is a working document and should be useful, available and comprehensible to all those dealing directly with the student. It needs to be considered in the context of home, school and classroom organisation.Effective individual education plans have key characteristics: Individualised and child-centred, Inclusive, Holistic, Collaborative and Accessible.

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STRATEGIC MANAGEMENT AND ITS IMPORTANCE IN THE BANKING SECTOR

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ABSTRACT

Management in banks has a unique aim, which is to create a clear picture of the appropriate directing of banking products, characterised by concentration on quality and integrity, maintaining interaction with the employees and beneficiaries of banking services and products, as well as creating solutions that would more successfully fulfil their needs. In order to achieve this, the management team should, first of all, accept all the accurate information on previous transactions, both those of legal and physical persons, and should fulfil their needs and realise their demands based on the principle of a business relationship. On account of the increased competition on the market, banks are additionally stimulated to introduce changes in their operations, to modernise their offer in order to survive on the market. The process of strategic planning in the banking sector may be presented as one of the most important factors for its long-term successful business operations.

Keywords: Banking services and products, competition on the market, strategic planning

INTRODUCTION

The conditions for conducting business operations in the banking sector have changed over time, as a result of which banks have adapted to the market conditions in various ways. The introduction of new technologies and the modernisation of business operations have contributed to facilitating business operations through the automatisation and acceleration of tasks. The number of banks is increasing, which has led to the increase of competition. In keeping with the new market conditions, banks have introduced a large number of new services and products, with which they could attract new clients, as well as retain the existing ones, striving to ensure better conditions through their business efficiency. Planning, organising, controlling and managing are components that are mutually interlinked and define what the management must do. Strategic planning, as a means of positioning one's bank on a competitive market and of searching for a method for strengthening the bank's position in the future, is implemented by all banks. Under the conditions of the functioning of the contemporary financial market, the essential element of bank management is strategic planning. The results that could be achieved in the coming period should be the main aim of the management. By defining concrete aims, whose realisation may be controlled and monitored, it is possible to undertake measures in a timely manner, if need be, for the purpose of improving business operations.

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Planning should be revised from time to time, including new information and circumstances. This should induce the management to follow the changes in the surrounding area, as well as inside the bank itself, which requires a lot of time and is not simple, but the results of such analyses may prove very useful. For a bank to conduct its business operations successfully, the management needs specific and universal knowledge and abilities. To prepare, pass, realise and analyse a decision if the responsibility of the management in banking, which is represented by an individual or a team. Apart from quality and ability, the banking management must possess leadership-related knowledge, ability and quality. The management of as bank is made up of managers who are at all the levels of the organisational and managerial structure, and it consists of the operative, middle and top-level management. The process through which managers define the mission of a bank, its key long-term objectives and develop the strategy for achieving those objectives and undertaking the necessary activities for the purpose of realising the plans through which the set objectives are to be achieved, represents the strategic management of that bank. When reviewing the vision of a bank, one proceeds from the current position on the financial market, analysing the negative and positive factors of a bank's business operations in relation to the competition. One of the important facts essential for strategic planning is the bank's magnitude thus far, measured by the levels of the balance of liabilities and assets, as well as the level of the bank's capital.

THE PROCESS AND IMPORTANCE OF STRATEGIC PLANNING

Strategic planning should be based on the anticipation of the key changes in the surrounding area, the defining of new strategies based on the exploitation of the existing strengths, the exclusion of weaknesses, the discovering of new potentials and the elimination of potential weaknesses that may occur in the future. A strategy represents a plan-based decision on the basic ways of realising the aims of business operations. A competitive advantage is the basic concept for understanding strategic decision-making. From the point of view of a bank, it is possible to achieve a competitive advantage as a result of various combinations of its operations and the manner of allocating resources among those operations (Sejfert, Egić & Nikolić, 2015, p. 84.) The banks whose strategic planning is based on offering better financial services and products, thus being better adapted to the new structure of demand for financial services, which offer better-quality and cheaper services, which apply the information technology to a high degree and conduct an appropriate marketing campaign, will be more successful in their business operations. The point to proceed from in the strategic planning of the business operations of a bank is the analysis of the overall supply of and demand for financial services as a creation of the future changes in the structure of the financial system; in accordance with this, each financial institution projects its own development strategy. The aim of such strategies is for a bank to precisely review the appropriate directions of its potential future development, so that it could position itself on the financial market in such a way to ensure the maximising of its profit and the market value of the bank. Plans should be viewed as the results of activities in which all the available information on the current and future conditions for conducting business operations are reviewed. Through planning, a bank would actually aim to achieve a greater degree of control of future developments, thus reducing uncertainty and realising that which has been planned. When planning, what should also be considered is internal organisation, for the success of a bank's business operations greatly depends on the quality and successfulness of the employees. Plans may be categorised according to various criteria: (Vunjak, Ćurčić & Ugrinov, 2011, p. 250.)

- the time period (short-term, medium-term and long-term plans),
- the business function that a plan pertains to (for example, a marketing plan, financial plan, human resources plan),
- the organisational aspect (plans that pertain to individual organisational units and plans that pertain to a bank in its entirety),
- a hierarchy of plans (a strategic, tactical and operative plan).

Plans that pertain to a programme and aims which are to be realised during the course of one year are short-term ones, medium-term plans pertain to a period of two to five years, whereas plans that refer to a period of more than five years are known as long-term plans. Planning activities for each business function of a bank separately is essential, for in that way one can more simply follow the business operations of the bank and evaluate the successfulness of each sector of the bank. Such a selective manner of planning makes it possible, in case of a decline in the sphere of business results, to perceive more easily and readily in which segment the problem arose by analysing what of the established plan was actually achieved.

In order for the business operations of a bank to unfold without any appreciable problems, it is necessary to observe the procedures and rules. By applying certain procedures, one achieves a greater degree of homogeneity in conducting business operations and fulfilling tasks; also this makes it possible to educate the employees, to achieve a better communication between various management levels and to define aims more easily. By defining the aims of organising, developing the ways of realising these aims and recognising favourable opportunities, one initiates strategic planning, which is based on the complexity of the entire business surroundings.

A. Strategic analysis

Before the actual process of planning the strategy, it is necessary to conduct research into the market itself: whether it is a stagnating or declining market segment, and to analyse the inner weaknesses and strengths, upon which the selection of strategies depends. A market with a stable structure and number of consumers, the usual needs of beneficiaries, familiar technologies, familiar competitive relations, is regarded as a stagnating market. The characteristics of a declining market are a reduction of the number and structure of the beneficiaries of services, outdated technologies and non-implementation of new ones, decrease of the number of competitors, the consequence of which is the need for reducing the costs of business operations by decreasing the number of branch offices. Strategic positioning is achieved through activities that are different from those of the competitors. There are three different sources of strategic positioning: 1. being different in relation to the products and services of the competitors, 2. positioning based on needs, 3. most or all of the needs of a special group of clients being met, 4. the basis for positioning is acceptability to the buyers, for it is possible to carry out their segmentation (Đuričin & Janošević, 2006, p. 208). The analysis of inner strengths and weaknesses is based on the analysis of the personnel structure of the information solutions applied and the technology used. For the purpose of conducting this kind of analysis, it is very convenient to use the SWOT analysis, which presupposes the identification of inner strengths (S) and weaknesses (W), as well as opportunities (O) and threats (T) from the surroundings.

If more elements are presented in the SWOT matrix,

the position of a bank on the market will be better reviewed and clearer. After conducting this kind of analysis, one may be familiar with the economic, political and social factors from the surroundings of the bank in question, and also with its potential in terms of the personnel structure, finances and the process of business operations.

VISION AND MISSION AS ELEMENTS OF STRATEGIC PLANNING

It is of great importance to know from the outset why a business operations subject is established, that is to say, what its contribution to its surroundings is. That may be presented through a bank's mission. The mission should provide insight into the purpose of the bank, that is, into why it should exist (Stojanov & Ugrinov, 2011, p. 252.) It is essential for banks to determine to whom they will supply their products and services and in what way, on which market or markets they will conduct their business activities, which values they will cultivate and observe. It is necessary to define a bank's vision, to review the surroundings within which it operates, its internal potential to realise that which has been envisioned, in order to be able to present its business operations. The vision and mission are oriented towards a bank's future and to what it should become. Through its vision and mission, a bank can point out to its business collaborators and potential clients what the general aims of its business operations are, and also what can be expected of it in the future. A bank's mission represents the essence of and the reason for its business operations. The five basic elements for understanding a bank's mission are: the history of the bank, the current characteristics of the management and the owner(s), the influence of the opinion of the surroundings where the bank operates, the bank's resources, the mission develops on the basis of its own ability. In order to present more precisely the direction in which the banks business operations will unfold, it is necessary to define its aims. Each aim should point to what is to be achieved and the outcome that can be expected. In order to be able to measure the results of a bank's business operations, it is desirable to express its aims quantitatively, which greatly facilitates implementing the process of control. The positive and negative factors pertaining to a bank's business operations, in relation to its competitor institutions, are as follows:

Table 1. The positive and negative factors pertaining to a bank's business operations

Positive factors	Negative factors
A broad client base	Poor management
A developed organisational network	Low profitability
A good personnel structure	Bad loans

A bank should review its positive and negative characteristics, in the sense of its competitive ability on the market, as precisely as possible. Of equal importance for strategic planning is the magnitude of the bank so far, measured by the level of its assets and liabilities, and also by the level of the bank's capital. Bearing all this in mind, the bank management should select a strategy of its future development that it considers to be optimal in the existing conditions. When it comes to the further development of the bank, what is important in terms of its choices is:
- whether it wishes to broaden the geographic sphere of its operations,
- which degree of diversification of its financial products it wishes to offer,
- to what extent it wishes to increase its balance level.

On the basis of thus defined choices, a bank derives implications concerning investments in the information technology, personnel structure of the network for selling financial services. Also, the aims should be arranged in a certain hierarchy in order to know which are the priority ones in relation to the time of execution and the importance of the effects to be achieved (Stojanov & Ugrinov, 2011, p. 260). It is also desirable to group the aims in accordance with the degree of their feasibility, for in a situation when it is estimated that one aim has a high degree of priority in relation to the others, it is possible for various hindrances to occur on the path towards its realisation, which in any case aggravates the position of the bank in the process of realisation of its aims, and it also depends on the employees' motivation to go on performing their work assignments in a quality manner. When making key decisions, the bank management bears in mind the changes of the overall structure of the financial market and the bank's business strategy this far. One of the initial visions in the further operation of the bank consists in whether the bank wishes to be more oriented to the economy or to the population, whether the bank wishes to develop in the direction of a universal bank with a large number of banking products and services. Thus some banks should decide whether they wish to deal with traditional business operations or to change their orientation and become commercial-investment banks. The geographic localisation of a bank's operation depends on the bank's magnitude, for banks with a strong financial potential may cover other countries apart from their own in their business operations. The standardisation of the management system has become an issue of prime importance when it comes to the business operations of organisations on the global market in the 21st century. By entering the international business surroundings, a bank comes into contact with numerous challenges, such as uncertainly on account of entering new and unfamiliar markets, getting acquainted with other legal regulations, the influence of new cultures (Slavić, Berber & Leković, 2014, pp. 45-58). Apart from owners whose priority are making a profit and increasing the profit rate on the capital invested as soon as possible, various stakeholders: clients, the social community, the employees, exert increasing pressure in an organised way and demand that organisations should adapt their management system according to various standards in order to be sure in advance that their expectations will be fulfilled (Heleta, 2010, p. 164).

SRATEGIC BANK MANEGMENT

The better the management functions, the more improved is the process of exploiting all the components at a bank's disposal. There exist experiences that confirm that total integrated system management is more productive by far than individual standardised systems. By improving communications between various organisational wholes, applying information technologies, better cooperation, working in processes and not only in functions, conditions have been created for employees to strive for a total management system (Heleta, 2010, p. 209). Business resources are what the bank management has at its disposal, and what it wants to do is to achieve the bank's organisational aims.

What is to be achieved through the circulation of banking products are the organisational aims of a bank, and these are: creating an image, reducing expenditures and increasing profit, defining the standards of quality of banking services and products, fulfilling the needs of the bank's clients. What is common to all banks is that managers at all levels possess knowledge of the result that the banks should achieve in the process of realisation. A successful management makes decisions and knows how to realise them. When it comes to how to run banks successfully, the basic element is knowledge of the banking operations and technology, which enables decisions to be implemented as well as possible. When searching for employees who can be good managers, companies look for individuals who possess technical skills, interpersonal skills, conceptual skills and management motivation (Gruber, 2001, p. 102). The features that dominate on the list of qualities are social and emotional quality: adaptability and confronting omissions and barriers, self-management, self-confidence, motivation for work and achieving aims, efficiency, team work, negotiating, leadership potential and skills (Nikić & Travica, 2014, p. 282). Bank management should pass through the processes of planning, organising, managing, control, logistics and controlling in order to precisely define the business policy of the bank; in order to achieve this, it is necessary first of all to gather all the information on the bank's previous business operations.

Table 2. Processes of bank's previous business operations

Planning	Encompasses the bank's activities, establishing the strategies and developing plans for coordinating the bank's activities.
Organising	Encompasses defining the tasks to be fulfilled, the manner of their realisation, those entrusted with the tasks.
Managing	Encompasses motivating the bank employees during the course of performing their tasks.
Control	Encompasses overseeing the existing results, comparing them with standard values and undertaking measures if need be.
Logistics	Reducing the expenditures and time in the process of realising the bank's set aims.
Monitoring	Encompasses the information function and coordination, and possessing information relevant for the management function.

Managing the business system of a bank is based on three basic inter-related systems: 1. the management system, 2. the operative system, 3. the information system.

The management system of a bank presupposes elements and processes of planning business activities, organising and performing tasks, as well as control of the successfulness of the results achieved. The operative system of a bank pertains to professional, quantitative and qualitative performing of tasks whose aim is to generate expenditures and income for the purpose of making a profit. The information system should fulfil the need for accurate information and support to the management and operative system of the bank.

PLANINNG HUMAN RESOURCES

In order for banks to realise their aims, it is not enough to rely on external factors only, it is necessary to stimulate all the employees to work as a team and to contribute, through their engagement, to improving the bank's business operations and to its best possible presentation on the market. In order to reduce the possibility of avoiding the performance of certain tasks or shifting the blame to others in the case of inadequately performed tasks, it is necessary to precisely determine the responsibilities of individuals. When it comes to the strategy of planning human resources, there arise questions of the structure of the workforce on the basis of the level of education, of the number of workers, of the manner of obtaining additional training and education, and also of the level of personal income. By establishing the standards of job execution related to the realisation of banking services and products through the evaluation of real achievements and then controlling it, the management includes comparing the standards of operation and the actual achievements for the purpose of determining to what extent corrective measures should be undertaken. That is why it is of great importance for a manager to know the basic components of the tasks performed by his/her employees, to know the standards of work achievements and to be able to review the extent to which the employees implement the standards.

One of the most important characteristics required in the workplace today is the ability to adapt, both under the conditions of the work process and to the people who are a part of that work process (Nikić & Travica, 2014, p. 282).

A very important role of a manager is to be able to estimate in what way he/she should communicate with the employees so that they should be motivated for work as much as possible. Communication between a manager and the employees should ensure an entirely new working climate, the objective being to start improving the business performances with the participation of all the people in the organisation. In doing so, the employees may be enabled and motivated to learn from others with a view to complementing their own knowledge and experiences. Three key influences on the principle of leadership and participation have been established: a new awareness based on a better mutual understanding between the manager and the employees, competence that is achieved through changes for the better and involvement of the employees is the solving of problems, decision-making and proposing improvements and innovations (Heleta, 2010, p. 209). Employees differ to a great degree on the basis of how much effort they put in during the performance of everyday activities; the greatest amount of effort is required for working with clients, acquiring new knowledge and accepting new kinds of tasks. In segments of additional engagement of the employees, managers have the opportunity to stimulate the employees

in various ways. In banks, the employees represent one of the most important resources, for whether their number is to increase or diminish depends on their attitude towards the clients, which is the basic factor of a bank's survival on a competitive market. The only correct management policy is a fair and equitable treatment of the employees. Getting acquainted with what a manager should not do is just as useful as getting acquainted with what he/she should do. The first and major mistake is insensitivity to others, the second mistake pertains to indifference or arrogance, the third mistake pertains to betrayal of trust, while the fourth mistake would be excessive ambition (Williams, 2010, p. 18). A manager must step out in order to understand the employees, and also for them to understand him/her; he/she must first of all professionally perform banking tasks, respect the bank's clients, accept his/her duties and responsibilities and place the bank's interest above anything else. Management becomes an element of successful business operations through knowledge. The most successful organisations will be those that learn faster than their competition. The development of an organisation based on knowledge depends on the managers' choices. That is why it is necessary: to transform managers from users of information to creators of information, to assign to information the function of active knowledge, to eliminate excessive information and to make it possible for a manager to effectively and efficiently single out the necessary information (Heleta, 2010, p. 408-409).

Table 3. Elements and processes often encountered by managers and employees

Managers	Employees
Decision-making	Learning how to learn
Encouragement	Methods, techniques, tools
Adaptation	Diagnoses
Self-evaluation	Problem solving
Role model – by personal example	Measuring and decision-making
Vision	Hope
Team building	Trust
Empowerment	Self-evaluation
Inter-functional management	The relation buyer- supplier

Employers have a growing need for increasing quality of the work of employees under the modern conditions of conducting business operations and increase of stress on a daily basis, which equally affects all the actors, and emotional intelligence in the workplace has become more important than ever before (Nikić & Travica, 2014, p. 283). Managers, as persons of authority, are considered

responsible for all business-related moves. Accepting the managerial function at the same time means accepting the responsibility that goes along with it. Managers are evaluated depending on how successfully they perform the tasks entrusted to them; some of those tasks they perform with the help of the employees, and some of them they perform on their own.

B. Management in crisis and emergency situations
An efficient bank management successfully overcomes crisis situations by developing the adequacy of its strategies; by putting all defence mechanisms on alert, it is possible to deal successfully with crises and potential emergency situations. The manner of managing a business operation crisis and the budget accompanying this management belong to the planned components and the official business policy of the management. Within the framework of the business policy, the management should pay sufficient attention to a potential crisis event, and in connection with that, should establish a system of monitoring the surroundings with a view to reacting to the first signs of a crisis. For the purpose of functioning in a system of business operations affected by a crisis, the employees in all the segments of the work process in a bank should be prepared through appropriate training. A crisis situation, if managed in an appropriate manner, may prove useful through the implementation of a new strategy.

Within the business ambience of a bank, emergency situations occur frequently, so that the management must have them as part of its work description, as a potential situation of a business challenge. An emergency situation may arise both due to external and internal factors.

CONCLUSIONS

The surroundings of banks and the trends within them change continually, and these trends continue at an ever more dynamic tempo; under such conditions, planning becomes the basis of survival, which tends to change the roles of managers. Through planning, one considers various external and internal factors that may influence the performance of business-related tasks, in order to eliminate unnecessary actions and thereby make business operations more effective and efficient. A bank's vision and mission may indicate to business collaborators and potential clients what the general aims of its business operations are, and also what may be expected of it in the future. Strategic

planning and the role of managers enable banks to present all the important segments of their business operations in one place, which provides a basis for following the role of a bank in the future. The basic task of a management in the banking sector is to ensure the right products and services, to realise the sale of these products and services, and that there is a tendency of their continual improvement. Banks have similar or the same aims, but the ways of realising them are different; it falls upon the management to ensure a competitive advantage as a result of various combinations of its tasks and the manner of using the resources within the bank. The management should activate the potential of the employees as a source of the acquisition of knowledge and make it possible for them to become more engaged. In order to understand others, a manager should step out; first of all, he/she must professionally perform banking tasks, accept his/her duties and responsibilities, and place the interest of the bank above everything else.

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THE OTTOMAN TURKISH STUDIES FROM THE PAST TO PROSPERITY

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ABSTRACT

The article focuses on the progressive worldwide growing interest for the Ottoman studies through last decades, first caused by the changing of the attitude towards the national history and tradition in the same Republic of Turkey.
Key words*: Ottoman Turkish Studies, Ottoman language, Culture, Tradition*

VALUE OF TRADITION

As it is well known Ottoman Empire, founded by one Turkish tribe and ruled by only one dynasty through all its life, lasted almost six and half century and was one of the most powerful states in the history of mankind.

The abolition of the monarchy and the Caliphate and the proclamation of the Republic of Turkey in 1923 marked not only the end of a theocratic dynastic creation, but also the collapse of its intangible assets, on the ground. Thanks to the efforts and vision of Mustafa Kemal Ataturk, began the construction of a new, authentic Turkish building based on the return of the Turkish people to their own authenticity.

However, these changes have caused complete different attitude toward cultural life and particularly large gap in the sphere of language, especially its written forms.

„Comrades, we are adopting new letters to write in our beautiful language. The new letters will mark the value of our sound, beautiful and rich speech. We are forced to free ourselves from the incomprehensible signs that have kept our spirit in our fingers for centuries;" emphasized Ataturk on July 9 in 1928, announcing the introduction of a Latin script adapted to the needs of the Turkish language (Svetovski, 1938).

Two years later, on the opening page of the New Turkish dictionary, was published famous short speech of Mustafa Kemal Ataturk, pronounced on September 2nd 1930, and taken as the motto of the Turkish Language Reformatory School:

„*Milli* his ile dil arasındaki bağ çok *kuvetl*idir. Dilin milli ve zengin olması *milli his*in *inkişaf*ında başlıca *müessir*dir. Türk dili, dillerin en zenginlerindendir, yeter ki bu dil, *şuur*la işlensin. Ülkesinin, yüksek *istiklâl*ını korumasını bilen Türk *millet*i, dilini de yabancı diller boyunduruğundan kurtarmalıdır" (Türkçe Sözlük, 1988).

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„The connection between the national (***milli***) feeling and the language is very strong (***kuvetl***), and the development (***inkişaf***) of the national (***milli***) feeling is of particular consequence (***müessir***) that the language is national and rich. Turkish is one of the richest, and needs to be explored explicitly (***şuurla***). The Turkish people (***millet***) who can defend their bright independence (***istiklâl***) should also free their language from the yoke of foreign languages.‟ (Türkçe Sözlük, 1988)

In it, there are seven words that we have especially marked in both original and translated texts to make a clearer insight. Since then, none of the abovementioned words of Arabic etymology that entered the Turkish language during the Ottoman phase of its development has been eliminated from use, although there are four existing Turkish equivalents:

- inkişaf > gelişme
- istıklal > bağımsızlık
- şuurli > bilinçli
- müessir > etkili.

More than eighty years after the historical statement by Kemal Ataturk, the creator of a modern Turkish state and a stubborn supporter of cleaning Turkish language from other, and especially Arab and Persian lexical deposits, would certainly be deeply disappointed by the fact that his words did not lose much in the freshness. As can be seen, in addition to the Ottoman Corps, which will most likely remain forever in the Turkish language as a permanent foreign lexical heritage, as their removal would create irreparable lexical voids, certain old words and concepts of different origins have profoundly grown into lingual tissue and become its organic part. For this reason, they have remained in use until our days, despite the existence of adequate replacements (Čolić, 1999).

However, there is another, more important issue. As the testimony of this long-lasting period, we are faced now days by approximately almost 30 million of official documents and the grate number of other written papers, belonging to the corpus of historical and literature books.

The work on translation and publication of Ottoman documents in Europe has long tradition, almost since the beginning of 19th century.

In the Ottoman Empire the official beginning was marked by the Council of the Ottoman History (Târîh-i Osmânî Encümeni) started to work on February 9, 1910 and several months latter began the publishing of Ottoman Historical magazıne (Târîh-i Osmânî Encümeni Mecmuası), published for the first time in the same year, with the aim to prepare materials for Ottoman history.

But, despite its long academic tradition, increased interest in the Ottoman studies has only occurred in the last few decades and it is newdays visible in the full measure, in the most respectable universities all over the world, offering various possibilities and programs from basic learning and summer courses to the post-doctoral studies and researches.

It is quiet enough just to look for websites and to see how many institutions and associations are dedicated to the Ottoman Turkish Studies. Beginning From the Republic of Turkey itself, there are now more than hundred different universities all over the world from The United States , Japan, United Kingdom, Germany, Russia, France, Netherlands, Norway etc. with departments   and centers of near of /Near/ Eastern languages and civilization.

These centers have emphasized roles in temporary time, as it is mentioned in the program of Centre for Ottoman Studies at the University of London: The Centre's activities are particularly focused on understanding how the Ottoman past is experienced and used in contemporary contexts. The post-Ottoman focus of the Centre is further emphasised by an exceptionally cross-disciplinary profile of its Members.(https://www.soas.ac.uk/ottoman-studies/)

The reaffirmation of the Ottoman studies can be shortly illustrated just by the basic facts about the only one respectful international organization, as it is The Ottoman and Turkish Studies Association – OTSA.

Previously founded as Turkish Studies Association –TSA, in 1971, and afterwards in 2014 „members changed the name of the association to the Ottoman and Turkish Studies Association to best reflect the diversity of research interests and expertise among members in the association.‟ (https://otsa.binghamton.edu). More than one century from the appearance of this first Ottoman periodical published in the Republic of Turkey we have now several international professional magazines and periodicals as it is Journal of the Ottoman and Turkish Studies Association. (https://www.jstor.org/publisher/iupress)

One of the new activities is organizing of summer language programs for Ottoman language, as it was practice heretofore only for modern Turkish language.

As for our region, thanks to the pioneer efforts of professor Fehim Bajraktarevic, the beginning of Ottoman studies at the Belgrade University, as the first Oriental institution not only in the Kingdom of Yugoslavia, but also in Balkan penisnula, dates from 1926. Later on, in former Federative Republic of Yugoslavia, the crucial moment was the foundation of Oriental institute in Sarajevo in 1950.

In the coming years and decades the collecting and publishing of Turkish historical sources for the history of the Yugoslav people, was set as the primary task of this scientific institution. Through the passing years and decades significant number of works and papers focused on the many important questions concerning our past are the testimony of great achievements at this field.

We should also mention that the Faculty of Philosophy in Sarajevo has long tradition of oriental studies, where the Ottoman studies are the part of Turkish curriculum, as it is the case in Belgrade and Zenica. As far as we are informed, the Ottoman studies are also present at the University in Zagreb, especially by the Ottoman diplomatic and paleography at the History Department.

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