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P R E D G O V O R

Poštovani čitaoci, autori, saradnici,

Zadovoljstvo nam je predstaviti novo izdanje časopisa *Defektologija* sa izmjenjenim nazivom – Istraživanja u edukaciji i rehabilitaciji. Razvoj defektološke nauke, teorije i prakse, ali suštinska promjena društvenog viđenja invalidnosti, rezultirali su, pored ostalog, izmjenom naziva *defektologija* u naziv *edukacijsko-rehabilitacijska znanost*. Samim tim, javila se potreba da se časopis *Defektologija*, koji je u kontinuitetu izlazio pune 23 godine, terminološki uskladi sa nazivom znanosti čije teorijske i praktične rezultate istražuje, prikazuje i unapređuje. Nadamo se da ćete u časopisu naći korisne i interesantne teme iz područja edukacijsko rehabilitacijske znanosti, ali i iz srodnih disciplina, a naša misija je da stvorimo prostor za dinamičan i progresivan istraživački dijalog.

Zahvaljujemo se svima koji su nas pratili u dosadašnjem znanstvenom putovanju, ali i svima onima koji će nam se pridružiti u budućnosti.

Uredništvo

F O R E W O R D

Dear readers, authors, associates,

It is our pleasure to introduce you a new edition of the journal *Defectology* with the changed name - *Research in Education and Rehabilitation*. The development of defectology as science, theory and practice, but also, a fundamental change in the social vision of disability, resulted in, among other things, the change of the name *defectology* into the name *education and rehabilitation science*. Consequently, the need for the journal "*Defectology*", which has been continuing for 23 years to come, has been terminologically aligned with the name of science, whose theoretical and practical results are investigated, displayed and promoted. We hope that you will find useful and interesting reading from the wide field of education and rehabilitation science, but also from related disciplines, and our mission is to create a place for dynamic and progressive research dialogue.

We thank all those who have followed us in the current scientific journey, but also to all those who will join us in the future.

Editorial



RESEARCH IN EDUCATION AND REHABILITATION

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ABSTRACT

The aim of the study was to identify differences in the representation of individual externalized and internalized behaviours with regard to the gender of the respondents. The sample of respondents in this study consists of 450 primary school students (both genders). The survey was conducted in the first semester of 2017/18. The Achenbach System of Empirically Based Assessment (ASEBA Youth Self-Report - YRS; Achenbach, 2007) was used for the purposes of this study. The instrument measures adaptive functioning and competencies and maladaptive functioning, that is, behavioural, emotional and social problems between the ages of 11 and 18. T-test and descriptive statistics methods were used in the data processing. It was observed that externalized problems were statistically significantly more prevalent in male ($t = 233$; $p < 0.001$) and internalized problems are more prevalent in female respondents ($t = p < 0.001$). In addition, boys had statistically significantly higher scores on the Social problems and Rules-violating behaviours sub-scales. Girls had statistically significantly higher scores on the Anxiety / Depression, Somatic problems, and Thinking problems sub-scales. Through interpretation of the obtained results, it can be concluded that the considered psycho-social characteristics of students (gender) significantly contributes to the phenomenology of internalized and externalized behaviours, which suggests the possibility and justification of creating different interventions aimed at preventing risky behaviours of different groups of children and young people.

Keywords: Internalized and externalized problems, primary school, risky behaviours, prevention.

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SAŽETAK

Istraživanje je imalo za cilj utvrditi razlike u zastupljenosti pojedinih eksternaliziranih i internaliziranih ponašanja u odnosu na spol ispitanika. Uzorak ispitanika u ovom istraživanju čine 450 učenika osnovne škole, oba spola. Istraživanje je provedeno u prvom polugodištu školske 2017/18. godine. U istraživanju je korišten Achenbahov integrisani sistem procjene, verzija za samoprocjenu adolescenata (ASEBA Youth Self-Report - YRS, Achenbach, 2007). Instrument mjeri adaptivno funkcionisanje, odnosno kompetencije i maladaptivno funkcionisanje, odnosno bihevioralne, emocionalne i socijalne probleme u dobi od 11 do 18 godina. U odradi podataka korištene su metode deskriptivne statistike i t-test. Uočeno je da su eksternalizirani problemi statistički značajno više zastupljeni kod muških ($t = 233$; $p < 0,001$), a internalizirani kod ženskih ispitanika ($t = p < 0,001$). Pored toga, dječaci su imali statistički značajno veće skorove na podskalama Socijalni problemi i Ponašanje kojim se krše pravila. Djevojčice su imale statistički značajno veće skorove na podskalama Anksioznost/depresivnost, Somatski problemi i Problemi mišljenja. Kroz interpretaciju dobivenih rezultata moguće je zaključiti da razmatrana psihosocijalna obilježja učenika (spol) znatno doprinosi fenomenologiji internaliziranih i eksternaliziranih ponašanja, što upućuje na mogućnost i opravdanost kreiranja različitih intervencija usmjerenih prevenciji rizičnih ponašanja različitih skupina djece i mladih.

Ključne riječi: Internalizirani i eksternalizirani problemi, osnovna škola, rizična ponašanja, prevencija.

INTRODUCTION

One of the most common divisions of behavioural problems is the division into externalized and internalized behavioural problems (Achenbach, 2001). Externalized behavioural problems are also referred to as predominantly active behavioural problems and refer to insufficiently controlled behaviours and other directed behaviours. Internalized or predominantly passive behavioural problems refer to behaviours that are overly controlled and self-directed (Bouillet, Uzelac, 2007). In the definition of behavioural disorders, Lebedina Manzoni and Ricijaš (2013) refer to the division into two broad groups of symptoms that are complementary to the division into externalized and internalized problems: one that creates a problem for the environment and one that creates a problem for children / young people themselves.

Bornstein et al. (2010, according to Mahmutović, 2015) state that externalized behaviours include problems with attention, self-control, non-cooperative behaviour, as well as antisocial and aggressive behaviours, whereas internalized disorders refer to depressed moods, reticence, anxiety, feelings of inferiority, shyness, hypersensitivity and the feeling of somatic difficulties. It is worth pointing out that internalized and externalized disorders are often not mutually exclusive and that through many samples their positive relationship was concluded (Novak and Bašić, 2008).

According to Ashford and colleagues (2008, according to Bašić, 2009), internalized problems are intrapersonal disorders such as depression, anxiety and excessive apprehension (Achenbach, 2008), and they occur quite frequently up to the age of sixteen and approximately 15% of children have experiences of emotional disturbance (Costello et al., 2003, according to Bašić, Kooler-Trbović, Uzelac, 2004).

Risk factors are those characteristics, variables, or adverse circumstances that, by their influence, increase the possibility to develop certain behavioural problems in an individual's behaviour (Farrington & Welsh, 2008, according to Popović-Ćatić, Popović, 2009). The concept of risk factors has changed over time, so that from the original understanding of risk factors as stable, non-variable and specific circumstances, they have been now understood as variable variables that are closely linked to the developmental stages and age of children. A child "at-risk" is any child or young person who, due to various circumstances (cultural, economic, health, etc.), is deprived or has limited sources of support during development, and is consequently at risk of becoming an unsuccessful and unproductive member of a society/community. Every individual during his/her life experiences situations that present some degree of risk for the development of undesirable behaviours, but the number, duration and intensity of risk affects the effect on the development of the individual. It is generally believed that the presence of multiple risk factors is associated with undesirable behaviour. Also, risk factors affecting the development of undesirable behaviours in one developmental period may not necessarily have such an impact in later developmental stages (e.g. family relationships have a greater impact on a child's behaviour during childhood than in the later adolescence period). One of the important risk factors affecting the occurrence of risky behaviours in children is life with only one parent (father or mother), family conflicts, ignorance and neglect of the child, school failure, low self-esteem, adverse economic situation, physical, sexual and emotional abuse, lack of parental involvement in the life of the child, daily life of parents under stress, and lack of desirable forms of parenting behaviour (Amato 2001, according to Zloković, Vrcelj, 2010). In professional and scientific circles, as well as in everyday life, in addition to the term risky behaviour, some other terms are also used such as: behavioural disorders, educational squalor, social maladaptation, deviant behaviour, etc. Risky behaviours are those behaviours that endanger the health and overall physical, psychological and social well-being (Ilić et al., 2003; according to Popović-Ćatić, 2007: 32). The terms children "at risk" and youth "at risk" are a most recent, comprehensive denomination for children and young people with problems growing up, various behavioural disorders, etc. McWhirter et al. (1993, according to Mihić, Bašić, 2008) by these terms refer to children and young people who possess a "set" of behaviours, factors and consequences that pose a risk of negative events for the young man in the future. So, for example, children with behavioural problems, aggressive children, children with poor achievement in school have a poor prognosis regarding the manifestation of delinquent behaviour and other risky behaviours in adolescence (Bašić, Ferić Šlehan, Krantelić Tavana, 2007). To describe the risk to which children and young people are exposed, one must assume its continuum.

The aim of the study was to identify differences in the representation of individual externalized and internalized behaviours with regard to the gender of the respondents.

MATERIAL AND METHODS USED FOR THE PURPOSES OF THIS STUDY

Sample of respondents

The sample of respondents in this study consists of 450 primary school students (both genders). The research was conducted in the Municipalities of Dobož Istok (Dobož East) and Gračanica - in the primary schools in Klokočnica, Brijesnica, Lukavica and in the primary school "Hasan Kikić". The initial step in the research is to explore the attitudes of teachers and students about risky behaviour, as well as the prevalence of school violence. Seventh and eighth grades were selected by random sampling. The test will be conducted with each subject individually in accordance with the test requirements.

The method of research conduction

The survey was conducted during the first semester of 2017/18 (November-December), after the conduct of the research was approved by the Ministry of Science, Culture and Sports of the Canton of Tuzla, after the consent of the parents for the survey was obtained, as well as after an agreement was made with the principals and the Teachers' Council of the schools, in which the research was conducted. The students, at the beginning of the class scheduled to conduct the research, were explained how to complete the questionnaire. The examination process itself will take one school hour. The data were collected while ensuring the anonymity of the respondents, which contributed to receiving honest and realistic answers.

The implementation of research in primary school was preceded by an analysis of laws, by-laws and regulations that form the basis for the implementation of preventive action of the school. Teachers were also interviewed for the purpose of gathering meaningful data on the school's preventive function.

Measuring instrument

The Achenbach System of Empirically Based Assessment (ASEBA Youth Self-Report - YRS; Achenbach, 2007) was used for the purposes of this study. The instrument measures adaptive functioning and competencies and maladaptive functioning, that is, behavioural, emotional and social problems between the ages of 11 and 18. The instrument contains eight syndrome-specific scales that measure problems with co-occurrence and they are: Anxiety/Depression, Reticence/Depression, Somatic problems, Social problems, Thinking problems, Attention problems, Rules-violating behaviours, and Aggressive behaviour. The syndromes are grouped into externalized and internalized ones. Externalized syndromes refer to conflicts with other people and their expectations, which include Rules-violating behaviours and Aggressive behaviour (examples of claims: "I violate rules at home, at school, etc.", "I often mock others." Internalized syndromes refer to psychological problems directed at the individual and overly controlled behaviours, which include Anxiety / Depression, Reticence / Depression, Somatic problems (examples of claims: "I am shy," I try to keep aside ", I am not happy, I am sad, sad or repressed).

Behaviour is estimated at 112 statements, with a three-point Likert-type scale. Respondents were tasked with answering each of these 112 statements in the questionnaire with: 0- not true, 1 - sometimes or partially true, or 2 - completely true. Higher scores imply a greater representation of behavioural problems.

Method of data processing

Statistical program SPSS 20.0 for Microsoft Windows was used for data processing. The Cronbach's alpha coefficient was used to prove the metric properties of the scales. Descriptive statistics methods and t-test were used in the data processing. Within the descriptive statistics, basic indicators, arithmetic mean, dispersion measures such as standard deviation, minimum and maximum characteristic values, and range of variation were calculated.

RESULTS AND DISCUSSION

The sample consists of students of both genders, aged 12-13. Table 1 shows the sample structure with regard to gender and age of the respondents.

Table 1. Distribution of respondents with regard to gender and age

			Grade		Total
			VII	VIII	
Gender	male	N	93	140	233
		% within Gender	39.9%	60.1%	100.0%
		% within Grade	47.9%	54.7%	51.8%
	female	N	101	116	217
		% within Gender	46.5%	53.5%	100.0%
		% within Grade	52.1%	45.3%	48.2%
Total	N		194	256	450
	% within Gender		43.1%	56.9%	100.0%
	% within Grade		100.0%	100.0%	100.0%

Male adolescents (233) and female adolescents (217) are fairly uniform in the sample. Out of the total number of respondents, 194 are 12 years old and attend the 7th grade, 256 are 13 years old and attend the 8th grade.

Table 2. Gender differences in the overall level of behavioural disorders and internalized behaviours, considering risk factors Anxiety/Depression, Reticence/Depression, Somatic problems, Social problems, Thinking problems, Attention problems, Rules-violating behaviours, and Aggressive behaviour

Variable	Gender	N	AM	SD	t	p
Anxiety/Depression	male	233	21,54	5,19	2,17	,02
	female	217	24,90	5,16		
Reticence/Depression	male	233	11,47	2,45	-,20	,63
	female	217	12,05	2,64		
Somatic problems	male	233	11,24	3,00	2,10	,03
	female	217	14,27	3,24		
Social problems	male	233	14,02	3,00	-2,40	,01
	female	217	15,13	2,77		
Thinking problems	male	233	13,05	3,33	-2,01	,04
	female	217	13,10	3,40		
Attention problems	male	233	42,54	6,57	-1,74	,08
	female	217	43,04	5,93		
Rules-violating behaviours	male	233	16,61	3,17	-5,97	,00
	female	217	15,76	2,53		
Aggressive behaviour	male	233	28,82	5,60	1,24	,11
	female	217	27,51	5,02		
Internalized problems	male	233	48,24	8,07	-3,65	,00
	female	217	49,56	8,41		
Externalized problems	male	233	45,44	8,18	5,73	,00
	female	217	45,28	6,98		
Total score	male	233		24,20	1,01	,29
	female	217	513,57	21,75		

Given that students' gender is a relevant factor in relation to behavioural disorders, differences in the representation of externalized and internalized problems in male and female adolescents were also analyzed. Presumed significant differences in the representation of externalized and internalized problems between male and female adolescents were identified, and the results of the comparisons are presented in Table 2.

No significant differences were found between the male and female respondents in the total score on the YRS.

However, it was observed that externalized problems were statistically significantly more prevalent in male respondents ($t = 233$; $p < 0.001$) and internalized problems are more prevalent in female respondents ($t = p < 0.001$). In addition, boys had statistically significantly higher scores on the Social problems and Rules-violating behaviour sub-scales. Girls had statistically significantly higher scores on the Anxiety / Depression, Somatic problems, and Thinking problems sub-scales. Other studies confirm a higher prevalence of externalized problems in boys and internalized problems in girls. Research findings on the prevalence and manifestation of behavioural disorders lead to the conclusion of gender differences (Leadbeater et al., 1999; Oatly and Jenkins, 2003). Girls are twice as likely to develop depressive conditions as boys. It should be noted that depression, as an internalized problem, manifests itself differently in boys and girls. In boys, depression is manifested through impulsive and aggressive behaviour, and in girls, depression is manifested through reticence and depressed mood.

Externalized problems are manifested through relationships with the environment and include aggression and delinquent behaviour. These behaviours are more common in male adolescents than in female adolescents. It can be generally said that the results of the research consistently suggest that in adolescence, internalized problems are more common in girls and externalized problems are more common in boys (Macuka, Smojver-Azic, 2012; Oatly and Jenkins, 2003; Vulić-Prtorić, 2002). A study conducted in Brazil (Santos et al., 2015, according to Mohorić, Takšić, and Šekuljica, 2016) found that out of 349 children, 25% had externalized behavioural problems over a two-year period. Bearing in mind that externalized problems include a variety of behaviours and symptoms, it is important to highlight the link between the factors that affect them. We divide these factors into individual, family and environmental. In a study conducted by Vulić-Prtorić (2004), the results indicate that 73.5% of children and young people have experienced up to 35 psychosomatic symptoms in the last three months. For the emergence of internalized problems in the literature, the most commonly mentioned are certain risk factors that we divide into individual, family and environmental. In addition to the risk factors for developing the problem, there are also protective factors that reduce the possibility of these problems occurring. Social competence is one of them, and it denotes the ability to generate and coordinate flexible, tailored responses to requests, and to generate and exploit opportunities in the environment (Waters and Sroufe, 1983, according to Vulić-Prtorić, 2004). Lack of social competence can be a risk factor for the development of certain problems. Bornstein, Hahn, and Haynes (2010, according to Mahmutovic, 2015) wanted to examine, through a longitudinal study, whether social competence was related to the development of internalized and externalized problems in early adolescence. For a period of 10 years, the results showed that children with lower social competence, starting from the age of 4, showed a higher level of externalized and internalized problems when they were 10, as well as 14. With the same research, they came up with results that show that children who show more internalized problems when 4 years old also show more internalized problems at 10 years old, while at the age of 14 they show more externalized behavioural problems.

Children who have advanced social skills in early childhood are less likely to be exposed to psychopathological symptoms. According to the same authors, internalized problems at age 4 and 10 in children increase the risk of externalized problems at age 14. The relationship between social context and the development of behavioural problems has also been investigated by Burt et al. (2008, according to Nincevic, 2009). They have come to the conclusion that social competence and reactions to it, as well as rejection due to lack of competence, can shape a variety of emotional, cognitive and behavioural responses that affect the development of psychopathology in young people. Similar results were obtained by Mesman, Bongers, and Koot (2001, according to Pavlovic, Zunic-Pavlovic, 2012), where they point out that, in early childhood, emotional and behavioural problems lead to externalized problems in pre-adolescent age. Externalized problems are manifested through relationships with the environment and include aggression and delinquent behaviour. These behaviours are more common in male adolescents than in female adolescents. It can be generally said that the results of the research consistently suggest that in adolescence, internalized problems are more common in girls and externalized problems are more common in boys (Macuka, Smojver-Azic, 2012; Oatly and Jenkins, 2003; Vulic-Prtoric, 2002). Research findings also show the prevalence and manifestations of behavioural disorders that lead to the conclusion of gender differences (Leadbeater et al., 1999, according to Oatly and Jenkins, 2003). Girls are twice as likely to develop depressive conditions as boys. It should be noted that depression, as an internalized problem, manifests itself differently in boys and girls. In boys, depression is manifested through impulsive and aggressive behaviour, and in girls, depression is manifested through reticence and depressed mood.

CONCLUSION

The behaviour of the child is the result of individual and social factors between which there is a reciprocal effect and dependence, and risk factors should be viewed in the light of these complex relationships. It was observed that externalized problems were statistically significantly more prevalent in male respondents ($t = 233$; $p < 0.001$) and internalized problems were more prevalent in female respondents ($t = p < 0.001$). In addition, boys had statistically significantly higher scores on the Social problems and Rules-violating behaviour sub-scales. Girls had statistically significantly higher scores on the Anxiety / Depression, Somatic problems, and Thinking problems sub-scales. Through interpretation of the obtained results, it can be concluded that the considered psycho-social characteristics of students (gender) significantly contributes to the phenomenology of internalized and externalized behaviours, which suggests the possibility and justification of creating different interventions aimed at preventing risky behaviours of different groups of children and young people.

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POSSIBILITIES AND CONTENTS IN ADDING HORSEBACK RIDING TO RECREATIONAL ACTIVITIES

MOGUĆNOSTI I SADRŽAJI PRIMJENE JAHANJA U REKREACIJI

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ABSTRACT

The aim of this paper is to present the possibilities and contents in adding horseback riding to recreational activities. Horses - noble animals have always had an important place in human society. The horse is a loyal animal to the human and it is therefore considered to be a helper and a friend of the human. The relationship horses have with people is sometimes unusual and intimate. Horses exhibit a calming and healing effect on most people, and socializing with animals in psychiatry has long been a well-known therapeutic method. Being aware of this nobility and the ability of horses, the human decided to use these virtues for the purpose of health-rehabilitation and recreational tourism in the countryside. This approach also allowed for the most important thing, preserving the tradition of horse breeding and rural life. This is very important to note, as an increasing number of people from urban areas want to get closer to nature and experience the way of life in the countryside. It can be said that equestrian clubs as well as rehabilitation horseback riding associations are constantly developing, expanding and opening their new locations. Recreational activities that include horseback riding or just spending time with horses in nature are also on the rise, and we hope that the number of recreational clubs, tourist offers and all horse-related activities will only grow and expand from year to year.

Key words: horseback riding, horses, recreational activities, therapeutic horseback riding.

SAŽETAK

Cilj ovog rada je prezentiranje mogućnosti i sadržaja primjene jahanja u rekreativnim aktivnostima. Konji - plemenite životinje, oduvijek su imali važno mjesto u ljudskom društvu. Konj je čovjeku odana životinja te mu je zbog toga njegov pomagač i prijatelj. Odnos koji imaju sa ljudima je doista nekad neobičan i blizak. Na mnoge ljude djeluju umirujuće i iscjeljujuće, a druženje sa životinjama u psihijatriji je već odavno ponata terapijska metoda.

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Uvidjevši, tu plemenitost i sposobnost konja, čovjek je te vrline odlučio iskoristiti u svrhu zdravstveno-rehabilitacijskog te rekreacijskog turizma na selu. Takav način pristupa omogućio je i ono najvažnije, očuvanje tradicije uzgoja konja i života na selu. To je vrlo važno napomenuti, s obzirom da se sve veći broj ljudi iz urbanih sredina želi približiti prirodi i osjetiti način života na selu. Može se reći da se konjički klubovi kao i udruge za rehabilitacijsko jahanje neprestano razvijaju, šire i otvaraju svoje nove lokacije. Rekreacijskih aktivnosti koje uključuju druženje s konjima i jahanje u prirodi također je u porastu, te se nadam kako će iz godine u godinu broj rekreacijskih klubova, turističkih ponuda i svih aktivnosti vezanih uz konje samo rasti.

Key words: jahanje, konji, rekreacijske aktivnosti, terapijsko jahanje.

INTRODUCTION

Horses - noble animals have always had an important place in human society. The horse is a loyal animal to the human and it is therefore considered to be a helper and a friend of the human. In the course of evolution, horses helped humans to conquer and travel great distances, to conquer the terrain, horses participated with humans in hunting, in warfare, in transporting cargo, in cultivating land, horses were also a food source, civilizations arose on the hard work of horses, horses also were significant companions in conquering continents, trade developing and connecting societies. The horse additionally served the human for fun and recreation, and in return the horse received safety, care and protection from predators. The development, we can say, of a symbiotic relationship between human and horse is closely related to the development of human society, because the above reasons have greatly enabled the humankind to develop population faster and easier. Anyone who understands a horse as an attraction alone does not understand the depth of the relationship between the horse and the human, does not understand the sense of reciprocity and dependence on one another when sitting on the horseback. The relationship horses have with humans is sometimes unusual and intimate. Horses exhibit a calming and healing effect on most people, and socializing with animals in psychiatry has long been a well-known therapeutic method (Signal, Wilson and Nelson, 2016). Horses have a much more developed and more sensitive sense of hearing than humans. That is why they fear shouting and loud speech; so they like humans to speak in a calm tone. The touch plays an important role in the communication of / with horses, and so often we can see them nibbling on each other and massaging around their neck and withers, thus enhancing their interconnections and positively affecting their interrelationships. Humans are very important to them because when they are nervous and scared, gentle touches and speaking in a calm tone mean a lot to them. The relationship with a horse should be based on respect, not fear and pain. Until such a connection is established, you need to "convince" the horse that you are in charge. When you show insecurity, they will play with you and tempt you (Hermsen, 2003). Your horse is almost always bigger and stronger than you. Given that it weighs about 500 kg, the average riding horse is six times heavier than the average human, so you cannot overcome it with strength (Vogel, 2008). The horse must do an objective or move, only if it wants to, or it expects it, not because it fears you. Riding a horse and imprinting yourself in nature, leaving behind the greyness, noise and stress of a busy city life, is a unique recipe for enhancing the body and spirit of the modern day human.

There are many benefits of horseback riding as an activity: strengthening the physical musculature in all segments, increased levels of joint mobility, trained movement motility, and above all, horseback riding affects the psychophysical sense of pleasure, better functioning of the heart muscle and cardiovascular system.

It is up to the individuals to enjoy themselves, to indulge in the magic of this wonderful sport, without losing sight of the basic principles of the sport, which involves the synergy of the rider and the animal itself. If positive experience is made, horseback riding will undoubtedly become an unforgettable and pent-up part of your life for all time, and your pet will receive a wonderful horseman to share beautiful moments of sport, care and love with, and maybe get some carrots, apples or sugar cubes.

The aim of this paper is to present the possibilities and contents in adding horseback riding to recreational activities and tourism.

Psychophysical benefits of horseback riding

There are various types of sports that include outdoor activities and horseback riding. In equestrian sports, there is no age limit for practicing or participating in this sport, so we can include absolutely all generations of people in recreational and touring programs with horses. Horseback riding is considered an activity with excellent therapy qualities. Spending time outside and enjoying the fresh air enhances your well-being in the body and reduces stress. There is a sense of freedom and quality breathing, which is often considered the best feeling for a person. In addition, developing a sense of trust between the rider and the horse is a big deal. Horses can distinguish emotions in the human voice, so it is important to always be calm and gentle in the vicinity of the horse, then the time spent together will be done in the best possible atmosphere. There is always a dose of risk in this sport, so successfully meeting all the challenges is a great boost for self-confidence. Another thing that has a very positive effect on self-confidence is taking care of the animal, even greater than it is for itself. This also affects the happiness and satisfaction of the rider. Horseback riding is a great exercise and offers a number of health and fitness benefits:

- Develops/builds leg muscles
- improves balance and posture
- improves mental concentration
- develops/builds arm muscles and arm agility
- it also refreshes and clears the mind.

Three-dimensional rhythmic horse movements are similar to walking movements. By placing the rider in different positions on the horseback, different muscle groups can be exercised. Stopping and starting again and changing speed and direction when on horseback - all of it contributes to the desired effect.

Muscles become stronger due to increased handling while horseback riding. Although horseback riding is an exercise, it is perceived as pleasure and therefore the rider has greater tolerance and motivation to extend his/her training time. Being close to a horse alone has a calming effect on people.

Such a powerful and large animal with such gentle and sensitive touches evokes the best in humans, and many riders can attest to the following: “Anyone who once meets a horse and spends a moment with it will fall in love for all time, and that love is unbreakable.”

Therapeutic horseback riding

Therapeutic horseback riding is a relatively new therapeutic method in our country, which provides effective and stimulating therapy for people with disabilities, as well as people who have difficulties in social and emotional adaptation. The use of horses for therapeutic and rehabilitation purposes goes back four centuries. Liz Hartel of Denmark, who won a silver medal for Individual Dressage at the Olympic Games in Helsinki (1952), is a strong impetus in recent times.

Although suffering from polio, she has, in competition with many young and healthy people, achieved an enviable second place, clearly emphasizing the importance of using horses in therapy (Kušen, 2002). Since then, horseback riding therapy has attracted the attention of professionals and people who work with horses professionally.

There are three basic areas that indicate the need for the use of horses for therapeutic purposes:

- Medicine: Therapy for the development of motor skills of disabled individuals or "hypo-therapy"
- Pedagogy / Defectology: Therapy aimed at developing a personality of behaviour,
- „Pedagogical horseback riding“, „Defectological horseback riding“
- Sport: Therapy for recreation, competition, motivation development and recreational horseback riding

In working with children with special needs, we can also use equestrian vaulting (gymnastics on horseback, a very effective Olympic discipline in which vaulters on a galloping horse perform group figures).

The discipline is, of course, slightly modified, but is primarily intended for children with minimal physical disabilities, i.e. children with psychomotor and cognitive problems. The discipline is implemented by special educators-rehabilitators (defectologists), psychologists, social workers and similar professions, with of course additional training in special pedagogical vaulting.

Recreational activities, field training and workshops for younger age groups

The tourist offer for children of younger ages can be conducted as field training, recreational activity and workshops with horses. Beginner horseback riding courses can be enrolled by children aged seven at least. Horseback riding is an ideal form of recreational activity for children. In addition to horseback riding, indispensable care for the horse is a source of encouragement for the healthy development of the child. By taking care of animals, children develop their emotional and social life skills, they develop the ability to cope with new

situations and gain self-confidence. The program can offer horseback riding on ponies and horses, with professionally trained trainers for children.

It consists of hiking and gymnastics, horseback riding on ponies and horses with expert guidance, and introducing children to the way horses live on the ranch and in the wild. Horseback riding consists of putting a child on horseback and guiding the horse in a fenced-in riding area, creative workshops on the subject of horse life, art workshops, and educational workshops.

Programs for older children and adults

In schools, tourist offers and equestrian clubs, horses are used that are appropriate in size and strength to riders, that is, slower steeds with calm temperament and submissive behaviour.

This excludes temperamental horses and requires special assessment of the psychological profile of the steed. So, in addition to the body structure that allows for even movement, then good health, it is necessary to evaluate the extent to which the steed is ready to obey the inexperienced rider, but also how it tolerates misdirection and often erroneous movements. In order to spend free time even better, in recreational sports and tourist offers, it is necessary to design programs for horseback riders – amateurs, so they can choose the most interesting program for themselves.

Some programs that can be implemented at any time of the year, which include working and spending time with horses, can be:

- recreational horseback riding through nature
- horseback riding training in nature
- tour of old buildings or sights in the surrounding area on horseback
- family horseback riding
- horseback riding for beginners and experts
- unique equestrian marathons (one-day and several-day)
- excursions and camping with horses (tents, campfire, nature)
- various horse-related games for experienced riders - polo, medieval tourneys, horseball
- equestrian vaulting (horse gymnastics)
- equestrian competitions (various derivatives of sports disciplines for recreation).

Programs for the elderly

Programs that would involve the elderly must be planned and aligned with their capabilities and affinities. Therapies and exercises with horses are very effective both psychologically and physically. Older people generally have problems with excess leisure time, loneliness, and a great need for companionship and belonging. Horses play a big role in this context because their therapeutic effect on every segment of the human is widely known. Program content that would include such persons could only be a stay in nature with horses, hiking, socializing but also the mere touch of a horse.

Horseback riding is an action that has a positive effect on movement, psychosocial functions and has a physiotherapeutic effect, regardless the condition and disorders (Landsverk, 2019). Therefore, it is very useful to involve the elderly in gymnastics on horseback, as it affects the complete human being (body, mind, soul).

If there is no interest in gymnastics on horseback (which is because of fear or physical disability), another activity involving horses can be introduced, which is the horse drawn carriage ride. Horse drawn carriage rides have nothing to do with physical fitness and mobility, they simply allow people, regardless of their physical condition, to socialize with horses, and moreover, it is possible to organize sightseeing of cultural sites in the surrounding area.

CONCLUSION

Being aware of the nobility and ability of horses, the human decided to use these virtues for the purpose of health-rehabilitation and recreational tourism in the countryside. This approach also allowed for the most important thing, preserving the tradition of horse breeding and rural life. This is very important to note, as an increasing number of people from urban areas want to get closer to nature and experience the way of life in the countryside. On this basis, an increasing number of economies are managing to fulfil their potential in the form of tourism development. The potentials of already existing farms/ranches, which underpin horse-related business and the rural environment in Bosnia and Herzegovina, are certainly in development. However, they have certainly not reached their peak yet. It can be said that equestrian clubs as well as rehabilitation horseback riding associations are constantly developing, expanding and opening their new locations. Recreational activities that include horseback riding or just spending time with horses in nature are also on the rise, and we hope that the number of recreational clubs, tourist offers and all horse-related activities will only grow and expand from year to year.

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TEACHERS' ATTITUDES TOWARDS INTER-COEVAL VIOLENCE (BULLYING) IN PRIMARY SCHOOL

STAVOVI NASTAVNIKA O MEĐUVRŠNJAČKOM NASILJU U OSNOVNOJ ŠKOLI

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ABSTRACT

The aim of the study is to examine the attitudes of teachers and associates towards inter-coeval violence (bullying) in correlation with the actual presence of violence in schools. The study proceeds from the hypothesis that, according to the attitudes of teachers, violence is present as a problem at school, but that teachers' attitudes and teachers' perceptions of inter-coeval violence (bullying) do not correlate with the actual presence of violence in schools. The study included a sample of 83 teachers, of which 62 were female teachers and 21 were male teachers. For the purpose of this study, a measuring instrument was constructed in the form of a questionnaire. Results show that 51.8% of teachers think that inter-coeval violence (bullying) is unnoticeably present in schools. Results show that 41.2% of teachers consider that inter-coeval violence (bullying) as a problem is present at school, while 40% do not consider that inter-coeval violence (bullying) as a problem is present at school.

Key words: teachers, inter-coeval violence (bullying), school environment.

SAŽETAK

Cilj rada je ispitati stavove nastavnika o međuvršnjačkom nasilju u korelaciji sa stvarnim prisustvom nasilja u školama. U radu se pošlo od hipoteze da je prema stavovima nastavnika nasilje prisutno kao problem u školi, ali da stavovi nastavnika i percepcija nastavnika o međuvršnjačkom nasilju nije u korelaciji sa stvarnim prisustvom nasilja u školama. Istraživanjem obuhvaćen uzorak od 83 nastavnika, od čega je 62 nastavnice i 21 nastavnik. U svrhu istraživanja konstruisan je mjerni instrument u formi upitnika. Upitnik je bio koncipiran sa pitanjima otvorenog i poluotvorenog tipa. Rezultati istraživanja pokazuju da 51,8% nastavnika smatra da je međuvršnjačko nasilje prisutno u školama.

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Dobijeni rezultati pokazuju da 41,2% nastavnika smatra da je međuvršnjačko nasilje kao problem prisutno u školi, dok 40% nastavnika ne smatra. Istraživanjem su se dobili podaci da stavovi nastavnika nisu u stvarnoj korelaciji sa problemom međuvršnjačkog nasilja u školi.

Ključne riječi: nastavnici, međuvršnjačko nasilje, školsko okruženje.

INTRODUCTION

Inter-coeval violence or bullying is a phenomenon and social deviation that is pervasive in the daily lives of a large number of students, both in the Tuzla Canton and throughout the area of Bosnia and Herzegovina. The term inter-coeval violence (bullying) is a neologism composed of two words: inter-coeval and violence. The word inter-coeval is a compound word formed between two words: inter-(between) and coeval (peer), and represents a relationship, an action, an act that takes place between a pair of peers or a group of peers. In our domestic literature, the terms aggression, harassment, and abuse are most commonly used in the sense of the term violence, as well as English words mobbing and bullying. Olweus translated this term as violence too, Colloros as violence, bullying or abuse (Maleš, Stričević, 2005). Inter-coeval violence (bullying) is one form of social deviance as well as one form of behavioural disorder. A professional and broader social strategy aimed at preventing and treating behavioural disorders in children and young people presupposes, among other things, a clear definition, unambiguous classification, continuous recording and monitoring, and permanent documentation of the key features of this phenomenon (Uzelac, 2004; according to Bouillet and Uzelac, 2007). N. Myschker (1996, according to Koller-Trbović, 2003) under the term behavioural disorder, using the term disturbed behaviour, understands behaviours that, with respect to specific time, culture, and expected norms, are deviant and maladaptive or maladapted, conditioned organically and / or by reaction to the background and which, due to their multidimensionality, frequency and severity, weaken the potential for development, learning and work, which cannot be overcome or cannot be sufficiently overcome without special pedagogical-therapeutic assistance. Definitions of violence range from narrow definition, in terms of equating it with some of its forms, for example physical violence, to a broader definition that inclines from verbal violence to uncivilized behaviour, which most authors agree with (Martić, 2012).

Dictionaries have different definitions of violence:

- 1) the use of physical force to injure or hurt someone, or to damage something
- 2) the unlawful use of unlawful force or the effect obtained through the threat of such force,
- 3) violence or violent behaviour, or aggressive behaviour, is when an actor or perpetrator uses his or her body or object (including weapons) to inflict injury or pain on another person (Martić, 2012).

Inter-coeval violence (bullying) has been recognized as an important and serious social problem that we face daily in working with children. Undoubtedly, the school is the place with the highest prevalence of inter-coeval violence (bullying), regardless of the size of the school or the environment in which it is located.

Since the school is second in importance to the life of every child, right behind the family, it is necessary to make it a safe environment for every child in which he or she will strive to achieve the highest level of overall child development (Brajša-Žganec, Kotrla-Topi and Raboteg-Shari, 2009; according to Kruli and Velki, 2014). Research has shown that, if they feel safe and accepted in the school environment and accepted by their peers, students are more oriented towards socially acceptable behaviours, are more attuned to school and have more positive feelings. On the other hand, if the problem is not noticed on time, the consequences for the child can be very serious (Wentzel, 2003; according to Kruli and Velki, 2014). The incidence or frequency of inter-coeval violence varies significantly in research results from country to country, ranging from 9% to 54% (Nansel et al., 2004; Dake, Price and Telljohann, 2003; Mazur and Malkowska, 2003; Due et al.; 2005; according to Sesar, 2011). Inter-coeval violence (bullying) usually occurs in grades 4 through 8 of primary school (Bilić and Karlović, 2004). Girls are more likely to be abused by both boys and girls, while boys are predominantly abused by their own gender. Boys between the ages of 8 and 11 are more likely to act violently on their own than as members of a group, while boys over the age of 11 are more likely to commit group violence (Rigby, 2002). In contrast to the direct forms of violent behaviour whose incidence decreases with age, the incidence of relational forms of inter-coeval violence (bullying) increases with age (Rivers and Smith, 1994, according to Rajhvan-Bulat, Ajduković, 2012). The teacher is a person recognized by society and the education authorities as being qualified for the education and upbringing of children, youth and adults, and as such is responsible for the entire educational process. The teacher works not only to achieve certain results in work and learning, but also to encourage and develop a number of positive traits of his/her students. The teacher accomplishes social goals and educational tasks, providing students with theoretical and practical knowledge, forming their positive outlook on the world, developing their character and personality traits, as well as social activity (Gordon, 2001).

The aim of the study is to examine the attitudes of teachers and associates towards inter-coeval violence (bullying) in correlation with the actual presence of violence in schools. The study proceeds from the hypothesis that, according to the attitudes of teachers, violence is present as a problem at school, but that teachers' attitudes and teachers' perceptions of inter-coeval violence (bullying) do not correlate with the actual presence of violence in schools.

RESEARCH MATERIAL AND METHODS

Sample of respondents

The study included a sample of 83 teachers, of which 62 were female teachers and 21 were male teachers. The highest percentage of teachers is between 31-40 years old (45.8%). The research sample consisted of teachers from six primary schools in the four municipalities of the Tuzla Canton: Dobož Istok, Gračanica, Tuzla and Živinice. The primary schools surveyed are: Primary School Klokotnica, Primary School Brijesnica Velika, First Primary School Gračanica, Primary School Malešići, Primary School Kiseljak and First Primary School Živinice. Table 1 shows the distribution of respondents by gender and age.

Table 1: Gender and age of respondents

Gender		Age of respondent				Total
		20-30	31-40	41-50	51 or more	
Male	N	0	8	4	9	21
	%	0.0%	38.1%	19.0%	42.9%	100.0%
Female	N	4	30	18	10	62
	%	6.5%	48.4%	29.0%	16.1%	100.0%
Total	N	4	38	22	19	83
	%	4.8%	45.8%	26.5%	22.9%	100.0%

Method of conducting research

The research was conducted by the method of random selection of teachers in primary schools. A form on the voluntary consent of the teacher to participate in the research was signed for the research. In the empirical part of the research, the test method was used. The research technique used is a survey. The survey collected data on the current state and occurrence of inter-coeval violence (bullying) in primary schools in the Tuzla Canton area. Teachers completed the questionnaire individually, for which 10 minutes were provided. The completing of the questionnaire was anonymous, and it should have contributed to the objectivity of the answers.

Measuring instrument

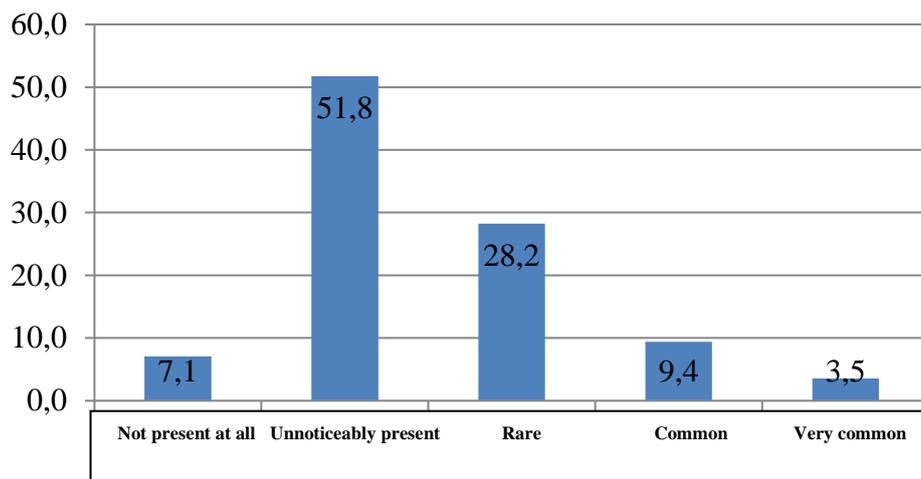
For the purpose of this study, a measuring instrument was constructed in the form of a questionnaire. The questionnaire was designed with open and semi-open-ended questions. The survey questionnaire for teachers is composed of 6 questions. The variables in the questionnaire were related to: the presence of inter-coeval violence (bullying) in the school where the teacher works, cooperation with the Centre for Social Work, and the recognition of inter-coeval violence (bullying) as a problem.

Method of data processing

Statistical data processing was performed with the following statistical values: percentages (%), frequency (f), arithmetic mean (M), standard deviation (SD), hi-square test, Spearman's correlation coefficient. The results of the analysis are presented numerically and graphically using numerical series, rank lists, tables and graphs. The "SPSS software package - version 16" was used to calculate the statistics.

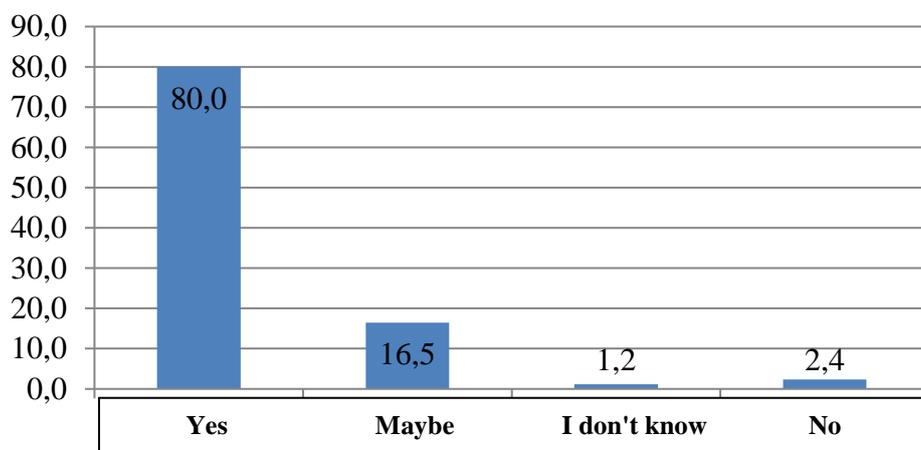
RESULTS AND DISCUSSION

The results of the survey will first be presented graphically, according to the questions in the survey questionnaire that had the most frequent answers. The questions presented on the graph provided answers on a Likert-type scale.



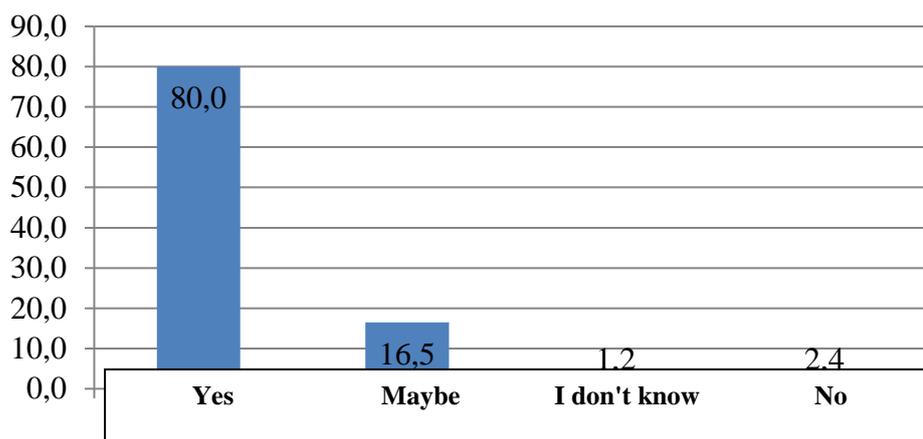
Graph 1: How much is inter-coeval violence (bullying) present at your school?

Graph 1 shows that 51.8% of teachers think that inter-coeval violence (bullying) is unnoticeably present in schools, 28.2% of teachers think that it is rare, 9.4% of teachers think that it is common, 7.1% of teachers think that it is not present at all and 3.5% of teachers think that inter-coeval violence (bullying) is very common in schools.



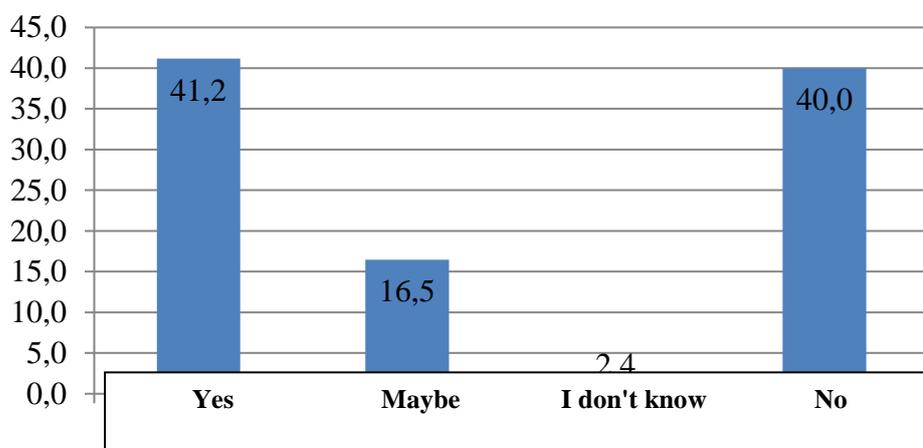
Graph 2: Is there cooperation with the Centre for Social Work regarding the prevention of inter-coeval violence (bullying) at your school?

Graph 2 shows that when it comes to the need for more active cooperation with Centres for Social Work in terms of prevention of inter-coeval violence (bullying), 80% of teachers' answers were affirmative.



Graph 3: Do you think there is a need for more active cooperation with the Centre for Social Work when it comes to preventing inter-coeval violence (bullying)?

The results obtained in Graph 4 show that 41.2% of teachers consider that inter-coeval violence (bullying) as a problem is present at school, while 40% do not consider that inter-coeval violence (bullying) as a problem is present at school. The set variable provided fairly uniform answers when it comes to teachers' attitudes towards the presence of violence as a problem at the school where they work.



Graph 4: Do you think that inter-coeval violence (bullying) as a problem is present at your school?

In order to test the research hypothesis regarding the relation between teachers' attitudes and the actual presence of school violence, Spearman's correlation coefficient will be applied. The results obtained are shown in Table 2.

Table 2. Correlation of teachers' perceptions of inter-coeval violence (bullying) and its actual presence

Variables		A	B
How much is inter-coeval violence (bullying) present at your school (students)	r	1	-.13
	p	.	.23
How much is inter-coeval violence (bullying) present at your school (teachers)	r	-.13	1
	p	.23	.

Legend: A - How much is inter-coeval violence (bullying) present at your school (students); B - How much is inter-coeval violence (bullying) present at your school (teachers)

Table 2 shows the results of the correlation analysis. The table data shows that there is no correlation between teachers' perceptions of inter-coeval violence (bullying) at school and the presence of inter-coeval violence (bullying). Based on the results of the correlation analysis, a working hypothesis of the research is accepted, which reads "It is assumed that teachers' attitudes and teachers' perceptions of inter-coeval violence (bullying) are not correlated with the actual presence of violence at schools." Thus, teachers' perceptions are not consistent with the actual presence of inter-coeval violence (bullying), that is, inter-coeval violence (bullying) often goes unnoticed by teachers, and this is certainly one of the major problems in the application of an adequate societal response to this socio-pathological phenomenon in society. Observing the safety of children in particular places at school; children are least likely to feel safe in the classroom while the teacher is absent, in front of other children who do not usually jump in to help the victim, and then on their way to and from school, and in the toilet. A large British-German study has pointed out that the schoolyard is the place where violence (bullying) is most common (Wolke et al. 2001, Dejanović et al. 2003). Earlier research has shown that the reason for the frequent violence in some places in the school is the reduced supervision of adults in these places. Olweus (1998) emphasizes the importance of a support system for children and an on-call teacher during school recess and emphasizes the extraordinary role of teachers in dealing with violence (bullying) at schools (Olweus, 1994, according to Flader, 2007). Some schools also monitor violence (bullying) at school by the presence of on-call teachers in the school corridors, and some by video surveillance cameras that allow a retrospective view of events (Stevens et al., 2001, according to Žunić-Cicvarić and Cicvarić, 2009). Bearing in mind several types of violence (bullying), the community must make special efforts to monitor both children who are victims of violence (bullying) and bullies, and also to implement prevention programs (Kim et al., 2005, according to Trabonja, 2010). Prevention programs targeting school violence (bullying) can reduce violent behaviour and their consequences.

CONCLUSION

According to the results, it can be concluded that intensive work is needed with teachers and professional staff in schools, because despite the perception of students and the actual presence of inter-coeval violence (bullying) in schools, teachers feel that the problem is not so pronounced.

The research confirmed the hypothesis that teachers' attitudes and teachers' perceptions of inter-coeval violence (bullying) do not correlate with the actual presence of violence (bullying) at schools. In order to inform and educate teachers about this complex socio-pathological phenomenon, seminars, workshops and panel discussions on this topic need to be organized. Thus, all teachers in schools would be required to attend these sessions in order to receive education and to get acquainted with the phenomenology of inter-coeval violence (bullying) and the real percentages. Verbal violence and psychological violence are a notable mention, because they seem "invisible", last longer before being discovered, but because of these facts they leave profound consequences that students later bear throughout their lives and that interfere with their daily functioning.

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COST OF WORKING IN INTENSIVE CARE UNITS: STRESS IMPACT ON EMPATHY AND WORK ABILITY OF HEALTHCARE PROFESSIONALS

CIJENA RADA U INTENZIVNOJ NJEZI: UTICAJ STRESA NA EMPATIJU I RADNU SPOSOBNOST ZDRAVSTVENIH RADNIKA

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ABSTRACT

Health care is very stressful profession with number of risks. Stress at work is overall present but in some departments more than other, especially in intensive care units. Assessing working conditions of 100 healthcare professionals regarding stress impact on empathy and work ability was the primary goal of this study. Survey was conducted in order to identify differences between work in intensive care units and other clinical departments all related to empathy, work ability and stress perceiving. In research group of intensive care units, lower empathy quotients, poorer work ability and different stressors were registered compared to research group other departments. Regarding influence of gender, females had better work ability in both groups but in a group of intensive care units males were more empathetic. Main conclusion of study states different dynamic in working environment of intensive care units compared to other departments that could potentially have negative effect on personal capacity of healthcare professionals.

Keywords: intensive care, empathy, work ability, stress.

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SAŽETAK

Zdravstvo je stresna profesija koja sa sobom nosi niz rizika. Iako je stres sugdje prisutan, na nekim odjeljenjima je intenzivniji posebno jedinica intenzivne njege. U radu je obuhvaćeno 100 zdravstvenih radnika sa ciljem procjene stresogenosti uslova rada i njihov efekat na empatiju i radnu sposobnost. U istraživačkoj grupi zdravstvenih radnika zaposlenih u jedinicama intenzivne njege registrovani su niži koeficijenti empatije, lošija radna sposobnost i različita percepcija stresora na radu u odnosu na zdravstvene radnike sa ostalih odjeljenja. U pogledu spolnih razlika, u obje grupe žene su imale bolju radnu sposobnost, dok su u grupi intenzivne zdravstvene njege bile manje empatične u poređenju sa muškarcima.

Opšti zaključak studije je da različita dinamika u jedinicama intenzivne njege u poređenju sa drugim odjeljenjima, može imati negativan efekat na lične potencijale zdravstvenih radnika.

Ključne riječi: intenzivna njega, empatija, radna sposobnost, stres

INTRODUCTION

The health professionals employed in the intensive care units are facing a very challenging patients and advancing medical technology. Intensive care includes the supervision, care, treatment and maintenance of the lives seriously ill or injured patients. By its nature, working in such conditions is highly stressful considering constant dealing with suffering, pain and death, in which many interventions are ungrateful, unpleasant, often degrading and some simply terrifying (Hingley, 1984). Any such situation that requires a healthcare professional to do what he or she cannot, should not, or does not want is termed a stressful situation, and represents a discrepancy between environmental demands and individual opportunities (Stansfeld and Candy, 2006).

In their study, Buddeberg-Fischer et al. (2005) point out that health professionals in intensive care units experience work overload, burnout syndrome, decreased work satisfaction, and thus are more susceptible to psychological distress. Most often, stressful situations are caused by the individuals' complicated nature of work tasks as well as different and vague expectations for the task. The stated ambivalence of the situation leads to the lack of proper feedback, conflicts of opinion, which creates pressure of timelines and the need for reorganization of work roles. This way, both individual and organization are damaged. The first tangible consequence of these conditions is a decline in empathic behavior. There are different ways of defining empathy, but most authors agree it is an understanding that improves diagnostic outcomes in the clinician-patient relationship, and has significant psychotherapeutic and counseling effects (Feudtner, Christakis, & Christakis, 1994; Ickes, 1997). Levasseur and Vance (1993) find that empathy is not a psychological or emotional experience, nor a psychological leap into another person's mind, but an openness and respect for one's personality. Analyzing the emotional aspect of the health profession and its impact on burnout syndrome, it is noted that, although low association with common work stressors (organizational problems, time pressure to complete tasks, etc.), there is a significant correlation between empathic response to patient and work performance.

The emotional weight of working with patients, after eliminating the impact of gender, age, social support, has the strongest effect on the empathy level in healthcare professionals (Cadman and Brewer, 2001). Working in conditions of prolonged stress leads to a health status deterioration and consequently, a decline in working ability. Work capacity includes individual and work factors that are relevant to a person's ability to cope with working conditions (Ilmarinen et al., 1999). It is basically a subjective perception of one's work ability. Ilmarinen et al. (1999) see person with good work ability as one who can adapt to the demands and influences of the workplace, without impairing his or her physical or mental health.

In the context of this definition, motivation for work, ability to adapt, responsibility, concentration, persistence and satisfaction with work are the basic factors that determine social maturity and mental health, and represent work performance (Skakić and Trajanović, 2011). However, healthcare professionals in intensive care units are burdened with additional risk.

Hasselhorn et al. (2003) point out that healthcare professionals working in intensive care units and emergency rooms share the same stressors as healthcare professionals in other departments, but the nature of work in intensive care units and emergency rooms is different than in others. Studies that measured healthcare professionals work ability index (WAI) in the intensive care unit indicate that they are significantly smaller compared to other wards. Emergency medical units with the lowest index values are particularly emphasized, which is explained by the large number of patients, intense stress, rapid decision making, and the nature of the work itself in these departments (Nowrouzi, 2013).

The aim of this study was to determine is there a difference between stress perception, empathy and work capacity in relation to gender, work experience between healthcare professionals working in different clinical departments.

RESEARCH MATERIAL AND METHODS

Present study by design was cross sectional with target population of healthcare professionals from different clinical departments of the University Clinical Center Tuzla (UKC Tuzla) and the Tuzla Health Center. The survey was self-assessed with standardized questionnaires conducted by online. Participants were informed of the study purpose and their participation was voluntary and anonymous.

Participants

The study sample included 100 health professionals (50 from Intensive Care Unit and 50 other clinical departments) including doctors, nurses and technicians with higher and university level of education, employed by local University Clinical Center and Health Center.

Design and Procedures

Participants in the study were grouped into two research groups. The criteria for the creating research groups were set by workplace (intensive care unit and other departments). Intensive care units group included healthcare professionals working in such departments: intensive care units of Clinic for Internal medicine, Clinic for surgery, Anesthesia and resuscitation clinic, Gynecology and obstetrics clinic, Infectious disease clinic, Psychiatry clinic, Lung disease clinic, Center of palliative care and Pediatric clinic. Participants with work place at Orthopedics and Traumatology Clinics, Radiology and Nuclear Medicine Clinics, Health Center, Clinics for Cardiovascular Surgery, Clinics for Ear, Throat and Nose Diseases were assigned to research group labeled as "other departments". Within the two groups, participants were observed by gender, working experience, perception of work stressors, quotient of empathy (EQ) and work ability index (WAI). The online survey contained general data on participants (clinical ward, gender, working experience) and standardized questionnaires (Cohen-Baron's empathy questionnaire, Questionnaire of workplace stress assessment by healthcare professionals, and Work Ability Index Questionnaire).

Measures

Empathy Questionnaire by Baron-Cohen and Wheelwright (2004) is a 4-point self-assessment scale. It consists of 60 items divided into two groups: 40 items (measure empathy), and 20 items are "filter items" that reduce respondents' bias in giving socially desirable answers and focusing on empathy. Half of the scores that measure empathy were formed by denying responses and the other half by affirming, also to eliminate bias in the affirmative/negative responses. The range of empathy scores is set 0-80. Correspondent empathy coefficients (EQ) based on points was set (low EQ: 0-32; average EQ 33-52; above average EQ 53-63; high EQ 64-80).

Questionnaire of workplace stress assessment by healthcare professionals (WHO, 2010) in the first part contains general information (gender, age, level of education, occupation, workplace, length of total work experience, length of work experience in the present workplace, working time). The second part was related to workplace stressors. Participants were offered 37 work stressors pertaining to work organization, shift work, career advancement, education, professional requirements, interpersonal communication, and fear of health hazards and harms. Respondents rated the experience of stressors on a Likert-type scale (1- not stressful at all; 2- rarely stressful; 3- sometimes stressful; 4- stressful and 5- extremely stressful). Stressors are grouped into 6 factors: (F1-Workplace organization and financial matters; F2- Public criticism and lawsuits; F3- Dangers and harms at work; F4-Conflicts and communication at work; F5- Working hours and shifts and F6- Professional and Intellectual Demands.

Work Ability Index (WAI) questionnaire was used to evaluate the subjective rating of work ability compared to the best level in life; subjective assessment of work ability in relation to the physical and mental demands of the workplace; number of diagnosed illnesses, subjective impact of illness on work, sickness over the past year, personal prognosis of working ability for the next two years and questions about mental health and satisfaction. The total WAI score was categorized as: poor work ability (7-27), moderate work ability (28-36); good working ability (37 - 43) and excellent working ability (44 - 49).

Statistical Analysis

Standard Statistical Package (SPSS) version 20.0 was used to analyze the results. Differences between two studied groups were assessed using t-test for independent samples and for three or more subgroups of participants, one-way analysis of variance (ANOVA). The correlation between the continuous variables was expressed by the value of Pearson correlation. Statistical significant was set at below 0.05.

RESULTS AND DISCUSSION

In gender structure of sample, men made up 49% and women 51%. The average experience of the participating health professionals was 13 years (13.05 ± 1.52). No significant difference was observed in the sample of respondents in terms of gender difference, job affiliation, as well as respondents' working experience ($t = 0.766$; $df = 98$; $p = 0.446$). In general, average EQ (41.08 ± 10.04) and moderate work ability (35.21 ± 8.1) are recorded on the overall sample (Table 1).

Table 1. Descriptive measures of overall sample

Characteristics	N	M (SD)
	%	
Gender		
Male	49	1.41 (0.75)
Female	51	
Total working experience		
<5 years	15	13.05 (1.52)
5-10 years	10	
11-15 years	13	
16-20 years years	12	
> 20 years	50	
Empathy Quotient (EQ)		
Low	18	41.08 (10.04)
Average	73	
Above average	7	
High	2	
Work Ability Index (WAI)		
Poor work ability	18	35.21 (8.1)
Moderate work ability	34	
Good working ability	34	
Excellent working ability	14	
Total N	100	

$t_{(98)}=0.766$; $p=.446$; N- number of participants; M-mean; SD- standard deviation

Healthcare professionals in intensive care units experience workplace stressors differently from colleagues in other hospital departments (Table 2). The two research groups differ significantly in the perception of the most stressful factor. The factors "Organization of work and finance" and "Danger and harm at work" are the most stressful for group-intensive care units, while the group-other departments "Conflicts and communication at work" identify as the most stressful ($p < 0.05$).

Table 2. Distribution of Stress Factor Assessment by clinical department

Stressors	Clinical department	
	Intensive care unit M(±SD)	Other departments M(±SD)
F1- Workplace organization and financial matters	65.04 (14.55)*	57.87 (21.03)
F2- Public criticism and lawsuits	68.91 (19.35)	66.37 (22.96)
F3- Dangers and harms at work	78.07 (10.6)*	72.10 (7.68)
F4- Conflicts and communication at work	65.23 (24.72)	58.94 (27.10)*
F5- Working hours and shifts	42.24 (10.37)	54.88 (9.59)
F6- Professional and Intellectual Demands	58.87 (22.89)	53.69 (21.91)
Overall experience of stress	68.56 (16.27)	61.41 (19.22)
Empathy/scor	39.0 (10.81)	42.92 (9.01)
WAI	34.54 (8.36)	35.81 (7.95)

WAI- Work ability index; M- mean; SD-standard deviation

*ANOVA F=3.67; p<0.05

Similar to present findings, Lu et al. (2015) found in their study that healthcare professionals on emergency hospital admissions experienced constant stressful work during shifts, worrying about work errors, inability to move forward, insufficient staff number, while patients family indecency, poor work environment and administration are the least stressful. At the individual level, the results of independent studies (Duquette et al., 1994; Robinson and Pennebaker, 1991) for the most common stressors register: overload/constant increase in workload, poor communication with colleagues and superiors, imbalance of investment and outcomes in the clinician-patient relationship, and inadequate sense of self-actualization. The effect of these stressors were negative, because they prevent health professionals from satisfactorily completing their work tasks and thus personal satisfaction at work, and as a consequence, they have a sense of failure to fulfill the essence of their vocation. In the affective area, mood swings were the most common acute stress response, as opposed to decreased satisfaction, mental health disorders and burnout syndromes that develop as a long-term response to prolonged stress (Maslach et al., 2001). The decline in job performance is not necessarily present because the individual in stress puts more effort into performing tasks, but an increase in violent behavior, interpersonal conflicts, and hostile behavior is possible (Hockey, 1997). Such occurrences are indicators of a decline in empathy capacity. In this study, significantly lower (p <0.05) empathy scores and work ability indexes were also registered in the intensive care unit group, and stress intensity was perceived as more stressful than subjects in other departments (Table 3).

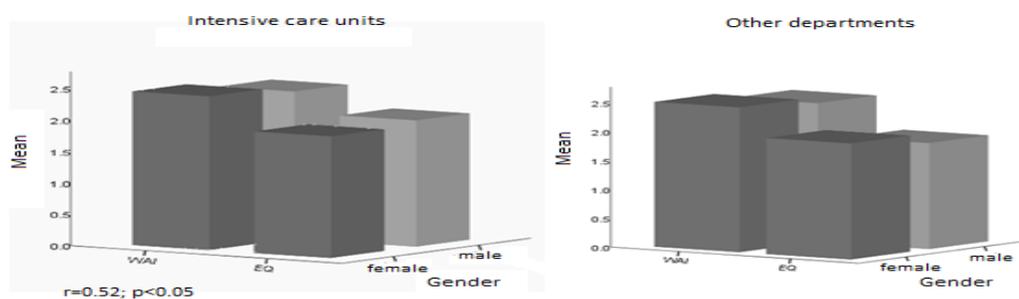
Table 3. Average values of healthcare professional characteristics by clinical department

	Intensive care unit	Other departments
	M (SD)	M (SD)
Total working experience /years	12.85 (1.63)	13.25 (1.42)
Empathy/score	39.0 (10.81)*	42.92 (9.01)
WAI	34.54 (8.36)*	35.81 (7.95)
Overall experience of stress	68.56 (16.27)*	61.41 (19.22)
N	47	53

WAI- work ability indeks; M- mean; SD-standard deviation

* $t_{(98)}=14.35$; $p<0,05$

The results of this study suggest that there are differences in empathy among healthcare professionals working in departments who have different patient contact. In both types of workplaces (intensive care units and other departments) average levels of empathy were registered, but the range of score was lower in intensive care units. In addition to work experience, the department in which healthcare professionals perform their work tasks significantly determines the development of empathy. Past experiences support the assumption that the amount of patient contact is a condition of empathy. The results of the study by Newton et al. (2000) support the results of this research. The authors report that health care professionals in the field of family medicine and pediatrics have more immediate empathy than their colleagues in the field of interventional medicine. Similar studies are reported by other studies where 94% of healthcare professionals are considering leaving the profession and 54.7% have a negative attitude towards work and are dissatisfied (Ilmarinen et al., 1999). When effects of aging, poor lifestyles, impaired physical health and frequent illness are added, poor work ability is a necessity (Fakhr-Movahedi et al., 2011). In a similar longitudinal study, Enzman (1995) emphasizes empathy (enjoyment and empathic distress) as the only dimension of burnout associated with work stressors (pressing deadlines, coping with severe illness and death). Some studies separately were interested in gender impact on empathy and work ability in various professions. In this study, the impact of gender on empathy as well as on work ability index was in significant ($r=0,52$; $p<0.05$ in the two research groups. In the intensive care unit, women had better working ability, but men were more empathetic, unlike other departments where women significantly scored more ($p <0.05$) in both, work ability and empathy (Chart 1).



Graph 1. Correlation between Work Ability Index (WAI) and empathy (EQ) by clinical department

Available studies show different results when it comes to the gender difference in the healthcare professional's empathy. In their study, Hoyat et al. (2002) found slight differences of empathy in healthcare professionals with respect to gender. The result is interpreted by fact that although the justification of the hypothesis of female sexuality regarding empathy, which is most often due to the educational style of girls, is justified, the nature of the health profession influences the necessity of empathic behavior irrespective of the gender. In most studies, men achieve lower scores than women on empathy tests, but statistically, such a difference was not significant. In their study, Slaski and Cartwright (2002) demonstrated an association between empathy and stress, health and work performance. They concluded that individuals who have a high performance on the empathy test experience significantly less work stress and were in better health.

CONCLUSION

Stress and emotional exhaustion have been recognized as the main reasons why healthcare professionals have long sick leave and, consequently, leave the profession. Although the healthcare profession is extremely stressful, some members of the profession are more vulnerable than others, healthcare professionals working in intensive care units, in particular. Complex working conditions leads to a decrease in their work capacity, and in their mutual contact with patients and colleagues they show less empathy compared to other healthcare professionals.

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ATTITUDES AND SOCIAL DISTANCE TOWARDS PERSONS WITH PHYSICAL DISABILITIES

STAVOVI I SOCIJALNA DISTANCA PREMA OSOBAMA SA TJELESNIM INVALIDITETOM

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ABSTRACT

The aim of this study was to examine the attitudes of the wider public towards persons with physical disability and determine the situation and the level of social distance towards this population of people with physical disabilities. The aim of the research was to determine the difference in the attitudes and the state of social distance in relation to age of persons covered by this study. The sample (N = 339) consisted of people of different ages, gender, qualifications and occupations chosen randomly from the territory of Bosnia and Herzegovina. The only criterion for the selection of the sample implies that these are people who have no personal or professional contact with persons with disabilities. The scale of social distance (Ouellette-Kuntz, Burge, Brown, Arsenault, 2010) for the purpose of this study was adapted in the sense that the required statements and opinions of respondents to people with physical disabilities, rather than to people with intellectual disabilities. Research data were processed by methods of non-parametric statistics. Frequencies and percentages were calculated. To investigate the influence of age on the respondents' attitudes towards persons with physical disabilities, cross - tabulation analysis was used, and for testing the significance of differences between the studied variables chi-square tests were used. The research results indicate that the majority of respondents showed a positive attitude and a low level of social distance towards persons with physical disabilities, although there is a smaller percentage of respondents who expressed negative attitudes and high levels of social distance. From the results of cross-tabulation analysis and chi-square test, it can be seen that there was no statistically significant difference in attitudes towards people with physical disabilities in relation to age of the respondents. With the increasing intimacy in the sentence or statement of the scale, the level of social distance among the respondents was increased too.

Key words: attitudes, the level of social distance, people with physical disabilities

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SAŽETAK

Predmet ovog istraživanja obuhvata stavove i nivo nivo socijalne distance prema osobama sa tjelesnim invaliditetom kod pripadnika šire društvene javnosti. Problem istraživanja predstavlja generalno ne poznavanje stavova šire društvene sredine prema osobama sa tjelesnim invaliditeom i vrstu i intenzitet mjera koji je potrebno preduzeti kako bi se javnost senzibilizirala i educirala o mogućnostima i pravima osoba sa tjelesnim invaliditeom. Cilj ovog rada bio je ispitati stavove šire društvene javnosti o osobama sa tjelesnim invaliditeom i utvrditi stanje i nivo socijalne distance prema ovoj populaciji osoba sa invaliditetom. Takođe, cilj istraživanja je i utvrditi razliku u stavovima i stanju socijalne distance u odnosu na dob osoba obuhvaćenih ovim istraživanjem. Uzorak ispitanika (N=339) činile su osobe različite dobi, spola, stručne spreme i zanimanja izabran metodom slučajnog izbora sa područja Bosne i Hercegovine. Jedini kriterij kod odabira uzorka je taj da su to osobe koje nemaju nikakav lični, niti profesionalni doticaj sa osobama sa invaliditetom. Skala socijalne distance (Ouellette-Kuntz, Burge, Brown, Arsenault, 2010) za potrebe ovog istraživanja adaptirana je u tom smislu da se traže tvrdnje i mišljenja ispitanika prema osobama sa tjelesnim invaliditetom, umjesto prema osobama sa intelektualnim teškoćama. Podaci istraživanja obrađeni su metodama neparametrijske statistike. Izračunate su frekvencije i postotci. Za ispitivanje uticaja dobi na stavove ispitanika o osobama sa tjelesnim invaliditetom korištena je cross - tabulation analiza, a za ispitivanje značajnosti razlika između ispitivanih varijabli korišten je Hi kvadrat test. Podaci su obrađeni u statističkom paketu SPSS 16. for Windows. Rezultati istraživanja ukazuju da je većina ispitanika pokazala pozitivne stavove i nizak nivo socijalne distance prema osobama sa tjelesnim invaliditetom, iako postoji i manji postotak ispitanika koji su iskazali negativne stavove i visok nivo socijalne distance. Iz rezultata cross-tabulation analize i hi-kvadrat testa može se vidjeti da nije nađena statistički značajna razlika u stavovima prema osobama sa tjelesnim invaliditetom u odnosu na dob ispitanika. Sa povećanjem intimnosti na ponuđenim tvrdnjama povećavao se i nivo socijalne distance kod ispitanika.

Ključne riječi: stavovi, nivo socijalne distance, osobe sa tjelesnim invaliditetom

INTRODUCTION

American sociologist R. E. Park (1924) defined social distance as the various degrees of understanding and sense of intimacy that occur in different personal and broader social relationships. The concept of social distance was developed by E. Bogardus, in order to explore attitudes and prejudices towards ethnic minorities. He points out that social distance to members of different ethnic groups depends mostly on existing prejudices and generalizations, and lastly on the individual experiences (Bogardus, 1925; according to Šlezak & Šakaja, 2012). Such a concept of questioning attitudes and prejudices soon found its application in research that addressed people with disabilities, especially people with intellectual disabilities. Social distance is a concept that reflects attitudes and is defined by “the will to recognize, live close to or be connected to a particular group of persons” (Harth, 1971).

Social distance is a term often used to describe attitudes toward stigmatized groups and was originally described by Bogardus as a “degree of sympathy and understanding” between individuals or groups (Bogardus, 1959; according to Ouellette-Kuntz, Burge, Brown & Arsenault, 2010). It evolved from the realization that physical distance was not adequate to measure closeness between people. For example, although two neighbours live close to each other geographically, their social distance depends on the level of emotional intimacy or social prejudice they have towards each other (Angermeyer & Matschinger, 1997).

People feel more comfortable with those who consider themselves similar and maintain a closer social distance with them. Conversely, if a person finds one's behaviour unusual or abnormal, he or she will establish a greater social distance between himself or herself and that person in terms of reservation or fear (Parillo & Donoghue 2005).

Each individual is a part and product of their social environment, including the disabled individuals. The patterns of relationships of this individual with people, attitudes and behaviours are the result of harmonious and disharmonious relationships with family members, friends, community members, work colleagues, employers, partners, etc. It is tragic, however, that persons with disabilities are less handicapped because of their own disability, but more because of the attitudes of society. The disabled person is, like any other person, a social being. The irony, however, is that a person with a disability is not accepted by society as it is. In the perception of a person with a disability, society focuses on its disabilities and limitations, rather than opportunities and potential. For decades, research findings have shown that people without disabilities avoid contact with people with disabilities because they are unsure how to behave in their presence (Thompson, 1982; Yamoto, 1971). Goffmann (1963), a sociological analyst of stigma and its effects on socially marginalized groups, has often been cited in the literature dealing with disability. Goffman's (1963) thesis states that relationships between persons with disabilities and persons without disabilities are strained, full of misunderstanding and interference. Murphy (1990) described disability as a “disease of social relations”, further stating that “social relations between persons with disabilities and persons without disabilities are tense, strange and problematic. This is something that every handicapped person knows.” Summarizing the results of their research, Murphy et al. (1988) concluded that “handicapped persons claim that non-handicapped persons behave as if the first group was contagious.” Yazbeck et al. (2004) found that younger individuals with higher levels of education and more contact with people with intellectual disabilities had more positive attitudes toward these individuals and inclusion. Quoting other authors (Horner-Johnson et al. 2000; MacLean & Gannon, 1995), they pointed out that educational attainment, by itself, has no greater influence on attitudes, but the type of profession has. Students of health sciences, pedagogical sciences, social work and natural sciences had less discomfort with contact with people with intellectual disabilities than students of economics, technical sciences and natural sciences. A national survey of public attitudes towards persons with disabilities in Ireland (2011) was conducted by the National Disability Authority on a sample of 1039 people older than 18 and without disabilities and 265 people older than 18 and with disabilities.

The results showed that attitudes did not change significantly compared to previous studies (2006), and that attitudes related to inclusion of children with disabilities even worsened. 68% of respondents think that in some situations persons with disabilities should be prioritized (compared to 80% in 2006), 50% of respondents think that persons with disabilities have the same educational rights as persons without disabilities, 20% of respondents think that persons with disabilities have equal rights to employment, 30% of respondents believe that persons with disabilities receive sufficient assistance from the state. Non-disabled respondents are relatively less willing to accept a disabled person as a co-worker or neighbour.

The aim of this research is to examine the attitudes of the general public in Bosnia and Herzegovina towards persons with physical disabilities and to determine the status and level of social distance towards this population of persons with disabilities in relation to the age of the respondents.

RESEARCH MATERIAL AND METHODS

Sample of respondents

The sample of respondents (N = 339) consisted of persons of different ages, genders, qualifications and occupations selected by the random selection method from the territory of Bosnia and Herzegovina. The only selecting criterion of the sample entails that respondents never had any personal or professional contact with persons with disabilities. The age of the respondents in the sample ranged from 13 to 74. Most respondents were 13-24 years old (51.04%), then 25-44 years old (99 or 29.60%), 45-64 years old (17.11%), and 9 respondents (2.65%) were older than 64. In the examined sample, there were 139 males (41.00%) and 200 females (59.00%).

Method of conducting research

The survey was conducted over a period of one month, during which trained interviewers interviewed people from their environment using the method of anonymous survey questionnaire.

Measuring instruments

The Social Distance Subscale (Harth, 1971), a subscale of the Multidimensional Attitude Survey on Mental Retardation (MASMR; Antonak & Harth 1994), derived from Mental Retardation Attitude Inventory (1981), was used for the purposes of this research, although both terms can still be found in the literature for the same scale (Ouellette-Kuntz, Burge, Brown, & Arsenault, 2010). The Social Distance Subscale (Ouellette-Kuntz, Burge, Brown, & Arsenault, 2010) has been adapted for the purposes of this research to seek the statements and opinions of respondents towards persons with physical disabilities rather than persons with intellectual disabilities.

On a four-point Likert-type scale, the respondents marked the level of agreement (I absolutely agree, I agree, I am not sure, I disagree and I absolutely disagree) with seven statements representing certain situations that imply a level of intimacy, and through their answers, respondents determined the level of social distance they would prefer in such situations.

The scale contains both positive and negative statements. Negative statements are coded to the contrary during the analysis.

The sample of variables defined for the purposes of this research is:

- Age of the respondent
- Gender of the respondent
- „I would let my child attend a birthday party of a child with a physical disability“
- „I would like my child to be close friends with children with physical disabilities“
- „I have nothing against a friendship between children with physical disabilities and children without disabilities“
- „I'd rather not have a person with a physical disability for dinner with friends“
- „I would not get into a pool when there is a person with a physical disability“
- „I'd love to introduce a person with a physical disability to my friends and neighbours“
- „I would rather not live in the same building with a person with a physical disability“

Data processing methods

The survey data were processed using non-parametric statistics methods. Frequencies and percentages were calculated. Cross - tabulation analysis was used to examine the effect of age on the respondents' attitudes towards persons with physical disabilities, and the chi-square test was used to test the significance of differences between the examined variables.

RESULTS AND DISCUSSION

From the results presented in Table 1, one can see the positive attitudes orientation towards persons with physical disabilities of respondents from the sample. No statistically significant difference between the age groups was found in any of the variables tested. In the UK public opinion survey (Staniland, 2009), conducted on around 3600 respondents, no significant difference was found with respect to age. Research conducted to determine the impact of age and number of contacts with persons with disabilities has largely confirmed that older people with more contacts with persons with disabilities also have more positive attitudes towards persons with physical disabilities (Ingstad and Whyte, 1995; Heyer, 2000a, 2000b; Beckwith and Matthews, 1995; Brigham and Malpass, 1985; Altman, 1981; Makas, 1989, 1990). Considering that one of the criteria for defining the sample of this research implied that the respondents had no close personal or professional contacts with persons with physical disabilities, the impact of the number of contacts does not exist. According to Yasbeck et al. (2004), on the other hand, younger respondents show less social distance to persons with disabilities than older respondents.

Table 1. Cross-tabulation analysis of the impact of age on the variable „I would let my child attend a birthday party of a child with a physical disability“

		„I would let my child attend a birthday party of a child with a physical disability“						
		I absolutely disagree		I am not sure		I absolutely agree		
			I disagree		I agree		Total	
age	13-35	N	4	9	21	91	112	237
		%	1,7%	3,8%	8,9%	38,4%	47,3%	100,0%
	36-74	N	4	2	8	32	56	102
		%	3,9%	2,0%	7,8%	31,4%	54,9%	100,0%
Total		N	8	11	29	123	168	339
		%	2,4%	3,2%	8,6%	36,3%	49,6%	100,0%
Chi-square Test		p=0,389						

Although there is no statistically significant difference between the age groups from the results of the cross-tabulation analysis, it can be seen that older respondents show more positive attitudes towards the variables: „I would let my child attend a birthday party of a child with a physical disability (Table 1), „I would like my child to be close friends with children with physical disabilities“ (Table 2) and „I have nothing against a friendship between children with physical disabilities and children without disabilities“ (Table 3).

Table 2. Cross-tabulation analysis of the impact of age on the variable „I would like my child to be close friends with children with physical disabilities“

		„I would like my child to be close friends with children with physical disabilities“						
		I absolutely disagree		I am not sure		I absolutely agree		
			I disagree		I agree		Total	
age	13-35	N	7	11	77	99	43	237
		%	3,0%	4,6%	32,5%	41,8%	18,1%	100,0%
	36-74	N	3	10	23	41	25	102
		%	2,9%	9,8%	22,5%	40,2%	24,5%	100,0%
Total		N	10	21	100	140	68	339
		%	2,9%	6,2%	29,5%	41,3%	20,1%	100,0%
Chi-Square Test		p= 0,139						

The results indicate that the level of social distance increased in both the younger and older respondents with an increase in intimacy on the measuring instrument. 59.90% of younger respondents (Table 2) *agree or absolutely agree* on the variable „I would like my child to be close friends with children with physical disabilities“, 32.5% of younger respondents answered with *I am not sure*. At the same time, 74.7% of younger respondents *agree and absolutely agree* with the statement „I have nothing against a friendship between children with physical disabilities and children without disabilities“, while 21.5% of the same respondents answered with *I am not sure*. 64.7% of older respondents *agree or absolutely agree* with the statement „I would like my child to be close friends with children with physical disabilities“, and 22.5% of the older respondents answered with *I am not sure*. 79.4% of older respondents *agree or absolutely agree* with the statement „I have nothing against a friendship between children with physical disabilities and children without disabilities“, and 16.7% of the older respondents answered with *I am not sure* (Table 3).

The research conducted by Olkin, Howson and Leslie (1994) showed that the negative attitudes towards persons with physical disabilities increase with the increase of the level of intimacy on measuring instruments.

Table 3. Cross-tabulation analysis of the impact of age on the variable „I have nothing against a friendship between children with physical disabilities and children without disabilities“

		„I have nothing against a friendship between children with physical disabilities and children without disabilities“					
		I absolutely disagree	I disagree	I am not sure	I agree	I absolutely agree	Total
age 13-35	N	3	6	51	110	67	237
	%	1,3%	2,5%	21,5%	46,4%	28,3%	100,0%
36-74	N	2	2	17	49	32	102
	%	2,0%	2,0%	16,7%	48,0%	31,4%	100,0%
Total	N	5	8	68	159	99	339
	%	1,5%	2,4%	20,1%	46,9%	29,2%	100,0%

Chi-Square Test $p=0,836$

The increase in social distance with increasing intimacy of the statements can also be seen in Tables 4 and 5, where on the variable „I'd rather not have a person with a physical disability for dinner with friends“ 10.8% of older respondents and 6.4% of younger respondents answer with *agree* and *absolutely agree*, while social distance decreases for the statement „I'd love to introduce a person with a physical disability to my friends and neighbours“, where 3.8% of younger respondents and 4% of older respondents answered with *I absolutely disagree* and *I disagree*.

Table 4. Cross-tabulation analysis of the impact of age on the variable „I'd rather not have a person with a physical disability for dinner with friends“

		„I'd rather not have a person with a physical disability for dinner with friends“						
			I absolutely disagree	I disagree	I am not sure	I agree	I absolutely agree	Total
age	13-35	N	3	12	49	100	73	237
		%	1,3%	5,1%	20,7%	42,2%	30,8%	100,0%
	36-74	N	1	10	16	46	29	102
		%	1,0%	9,8%	15,7%	45,1%	28,4%	100,0%
Total		N	4	22	65	146	102	339
		%	1,2%	6,5%	19,2%	43,1%	30,1%	100,0%

Chi-Square Test p=0,446

Table 5. Cross-tabulation analysis of the impact of age on the variable „I'd love to introduce a person with a physical disability to my friends and neighbours“

		„I'd love to introduce a person with a physical disability to my friends and neighbours“						
			I absolutely disagree	I disagree	I am not sure	I agree	I absolutely agree	Total
age	13-35	N	3	6	51	110	67	237
		%	1,3%	2,5%	21,5%	46,4%	28,3%	100,0%
	36-74	N	2	2	17	49	32	102
		%	2,0%	2,0%	16,7%	48,0%	31,4%	100,0%
Total		N	5	8	68	159	99	339
		%	1,5%	2,4%	20,1%	46,9%	29,2%	100,0%

Chi-Square Tests p=0,836

The level of social distance towards persons with physical disabilities in different social situations, such as the use of swimming pools (Table 6) and housing in the same building (Table 7), is low in both age groups. Both older and younger respondents expressed highly positive attitudes towards this population of persons with disabilities in everyday social situations. As can be seen from the results of the Chi-square test, there is no statistically significant difference between the age groups for the observed variables.

Table 6. Cross-tabulation analysis of the impact of age on the variable „I would not get into a pool when there is a person with a physical disability“

		„I would not get into a pool when there is a person with a physical disability“						
			I absolutely disagree	I disagree	I am not sure	I agree	I absolutely agree	Total
age	13-35	N	8	14	33	99	83	237
		%	3,4%	5,9%	13,9%	41,8%	35,0%	100,0%
	36-74	N	3	6	9	45	39	102
		%	2,9%	5,9%	8,8%	44,1%	38,2%	100,0%
Total		N	11	20	42	144	122	339
		%	3,2%	5,9%	12,4%	42,5%	36,0%	100,0%
Chi-Square Tests		p=0,766						

Table 7. Cross-tabulation analysis of the impact of age on the variable „I would rather not live in the same building with a person with a physical disability“

		„I would rather not live in the same building with a person with a physical disability“						
			I absolutely disagree	I disagree	I am not sure	I agree	I absolutely agree	Total
age	13-35	N	11	5	8	63	150	237
		%	4,6%	2,1%	3,4%	26,6%	63,3%	100,0%
	36-74	N	3	6	9	33	51	102
		%	2,9%	5,9%	8,8%	32,4%	50,0%	100,0%
Total		N	14	11	17	96	201	339
		%	4,1%	3,2%	5,0%	28,3%	59,3%	100,0%
Chi-Square Tests		p=0,029						

CONCLUSION

The research results indicate that the majority of respondents expressed positive attitudes and low levels of social distance towards persons with physical disabilities, although there is also a smaller percentage of respondents who expressed negative attitudes and high levels of social distance. The results of the cross-tabulation analysis and the chi-square test show that no statistically significant difference was found in attitudes towards persons with physical disabilities in relation to the age of the respondents. Although the results of this study show that the majority of respondents show a low level of social distance to persons with physical disabilities, it was observed that this level varies with the level of intimacy of the questions or statements offered.

Questions and statements that implied a greater level of intimacy increased the level of social distance towards persons with physical disabilities. For example, respondents showed a lower level of social distance on the statement „I have nothing against a friendship between children with physical disabilities and children without disabilities“, but this attitude changed for most of the respondents on the statement „I would like my child to be close friends with children with physical disabilities“, where social distance would increase. The above mentioned points to the need to design such questionnaires to assess attitudes toward persons with disabilities that would include questions with varying levels of intimacy (for example, related to marriage, work colleagues, sports activities, etc.). This would give a more realistic picture of the real acceptance of persons with disabilities in society. Also, future research should explore attitudes towards different types of disabilities in order to compare attitudes and levels of social distance to them, as well as attitudes and levels of social distance of persons with disabilities themselves towards persons without disabilities and society in general.

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ASSESSMENT OF SEXUALITY OF PERSONS WITH PHYSICAL DISABILITIES**PROCJENA SEKSUALNOSTI KOD OSOBA SA TJELESNIM INVALIDITETOM****Senad Mehmedinović¹, Lama Taletović¹**¹Faculty of Education and Rehabilitation University of Tuzla, Tuzla, Bosnia and Herzegovina**Original Scientific Article**

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ABSTRACT

The aim of the study was to assess the sexuality of persons with physical disabilities and to determine whether there were differences in relation to the respondents of typical development. The study included a sample of 60 respondents, over the age of 16. The total sample is divided into two sub-samples, of which the first sub-sample consists of persons with physical disabilities (N = 30) and the second sub-sample consists of persons of typical development (N = 30). For the purpose of the assessment of sexuality, the Sexuality Assessment Instrument was used. In order to verify the set study aim, a chi-square test for an independent sample of respondents was applied. Considering the results of the research, it can be concluded that people (of typical development) without disabilities experienced more French kissing but also regretted kissing. Persons (of typical development) without disabilities have experienced kissing against their will, while persons with physical disabilities have experienced the touching of the genitals of another person against their will.

Key words: Sexuality, persons of typical development, persons with physical disabilities.**SAŽETAK**

Cilj istraživanja je bio procjeniti seksualnost kod osoba sa tjelesnim invaliditetom, te utvrditi da li postoje razlike u odnosu na ispitanike tipičnog razvoja. Istraživanjem je obuhvaćen ukupan uzorak od 60 ispitanika, dobi iznad 16 godina. Ukupan uzorak je podijeljen na dva subuzorka, od čega prvi subuzorak čine osobe sa tjelesnim invaliditetom (N=30), a drugi subuzorak čine osobe tipičnog razvoja (N=30). U svrhu procjene seksualnosti, korišten je Instrument za procjenu seksualnosti. U svrhu provjere postavljenog cilja istraživanja primjenjen je hi-kvadrat test za nezavisan uzorak ispitanika. Uzimajući u obzir rezultate istraživanja može se zaključiti da su osobe bez invaliditeta više iskusile francuski poljubac ali i požalile zbog ljubljenja. Osobe bez invaliditeta su protiv svoje volje iskusili ljubljenje, dok su osobe sa tjelesnim invaliditetom protiv svoje volje jednom iskusile diranje spolnog organa drugoj osobi.

Ključne riječi: Seksualnost, osobe tipičnog razvoja, osobe sa tjelesnim invaliditetom.**¹Correspondence to:**

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INTRODUCTION

Motor development affects many aspects of a person's success in cognitive, perceptual and social development. Motor functioning difficulties are collectively referred to as developmental coordination disorders (Iveković, 2013). Motor disorders are a group of disorders of fine and gross motor and body balance, which create difficulties in everyday functional activities. Motor disorders also imply below-average physical functioning of different phenomenology and etiology (Horvatić, Joković Oreb & Pinijatela, 2009).

Physical disability is a phenomenon that primarily implies below-average physical functioning of various causes and phenomenology (Baftiri, 2000). From a medical or etiological point of view, persons with physical disabilities have injuries, deformities, functional insufficiency or disabilities caused by damage to the locomotor system of the central or peripheral nervous system, and who need constant or occasional professional help in education and training for work and life under appropriate conditions. This definition emphasizes the limited functioning of the musculoskeletal and neuromuscular systems and the various deformities on the corpus and extremities. From a social point of view, organic-functional deficiencies and irregularities are emphasized, which significantly reduce the ability to integrate into work and social life. From the pedagogical point of view, the physical irregularities that make it difficult or impossible for the upbringing and education of such children under standard educational conditions are emphasized (Zovko, 1996).

The field of motor disorders and chronic diseases is a very broad area, which is particularly emphasized in modern epidemiological indicators (Martinec et al. 2006). In 2020, chronic health conditions are expected to participate with 60% of the world's total disease incidence. These data should be observed somewhat in relation to the development of various medical and paramedical fields, including the interdisciplinary field of educational and rehabilitation sciences, rehabilitation technology, the "new" psychology of handicap and the psychology of "bionic man" (Martinec et al, 2006).

The issue of sexuality is an under-researched topic in our area, while its study, especially in the population of people with disabilities, can contribute to a better understanding of the various areas of human nature that make up sexuality. In this context, it is necessary to look at some theoretical considerations of the concept of sexuality. According to the World Health Organization (WHO, 2004), sexuality is a central aspect of human beings, which includes eroticism, intimacy, pleasure, reproduction and personal gender identity. The manifestations of sexuality are not only related to sexual behaviours, but also to desires, longings, fantasies, attitudes, roles and relationships. Adolescent sexuality is more than the first sexual intercourse or "sexual risk"; it implies feelings about oneself, self-esteem, attitudes and behaviours (Graber & Sontag, 2006). Sexuality is a basic dimension of human existence that includes gender, age, gender identity, sexual orientation, eroticism, emotional attachment and reproduction. It is expressed and experienced in thoughts, fantasies, desires, beliefs, attitudes, values, activities, practicing, roles and relationships. It results from the interdependence of biological, psychological, socio-economic, cultural, ethical, and religious and / or spiritual factors. The definition was provided by the American branch of the World Health Organization and the International Society for Sexology.

As stated by Miljenović (2010), this is perhaps one of the most comprehensive definitions of sexuality - Human sexuality, as defined by Haffner (1990), encompasses an individual's sexual knowledge, beliefs, attitudes, values and behaviours. It is associated with the anatomy, physiology and biochemical systems of sexual reactions, with roles, identity and personality, with individual thoughts, feelings, behaviours and relationships. It raises ethical and spiritual questions in relation to different socio-cultural backgrounds, as well as individual groups within them.

Young persons with disabilities are generally perceived as physically less attractive and less desirable as partners, and their environment often denies, reduces or regulates their potential and the need to express sexuality (Laklija and Urbanc, 2007). The denial of sexuality in persons with disabilities is not only specific to the youth period, but is present in all age groups of persons with disabilities. Particularly strong pressure from the environment (family, institutions, and practitioners) in the form of various measures of "institutional discipline and regulation of sexuality" was exerted on girls and young women with disabilities. Even today, many institutions for the accommodation and / or assistance of persons with disabilities do not recognize the needs of users for privacy and especially not for the kind of privacy that would allow them to have an active sex life within the institutional setting (Nocon and Pleace, 1997). The dangers of lacking sexuality education for a young person with a disability (but also for every young person in general) are serious and can result in fear and feelings of shame, unacceptable sexual behaviour, environmental ridicule, unplanned pregnancy, STDs. Further risks may even include not recognizing and supporting the exploitation and various forms of abuse of a disabled person, since they are unable to understand what is happening to them (Ballan, 2001; according to Hibbard et al., 2007). The presence of any type of disability can be a problem for entering into romantic relationships, which precede the formation of sexual relations. This is especially pronounced for physical disability, due to the inability to conceal a physical deficiency or the function of the body. If one considers that aesthetic appearance plays a large role in the initial contact of a partner, then it can be said that persons with physical disabilities are in an unenviable position. The complexity of the topic of sexuality of persons with disabilities in Bosnia and Herzegovina is also compounded by cultural and religious determinants, gender and the level of education to which they relate, and the level of education and awareness of sexual activities, sexual health, and attitudes about sexuality. The need for this subject research lies in the fact that, in general, little attention is paid to sexuality and in particular to the sexuality of persons with certain disabilities. Sexuality as a basic human physiological characteristic and active sex life as a basic human need are ignored. In view of the above, the aim of this study is to assess the sexuality of persons with physical disabilities and to determine whether there are differences in relation to the respondents of typical development.

MATERIAL AND METHODS

Sample of respondents

The study included a sample of 60 respondents, over the age of 16. The total sample is divided into two sub-samples, of which the first sub-sample consists of persons with physical disabilities (N = 30) and the second sub-sample consists of persons of typical development (N = 30).

Method of conducting research

The survey was conducted in the area of Tuzla Canton. Data were collected through written examination through the above assessment instruments, with prior oral explanation of its correct application. After explaining the purpose and significance of the survey, respondents were asked to sign consent to participate in the survey. Both groups of respondents (the group of respondents with physical disabilities and the group of respondents of typical development) were examined individually. The examination was anonymous and was conducted in the agreed terms with the respondents, at their home or at the institution. The respondent was able to answer each question by completing one of the offered answers, which were later numerically coded and entered into the prepared data matrix.

Measuring instruments

Sexuality Assessment Instrument (Graaf H, Meijer S, Poelman J, Vanwesenbeeck I. 2005).

The Instrument covers the following topics: romantic experience, sexual experience, perception of planning the first sexual experience, perception of time of first sexual experience, assessment of first sexual experience, perception of regret about the first sexual experience, voluntariness for first sexual experience, same-sex attraction, same-sex sexual behaviour, confession, use of contraception during first sexual experience, use of contraception with the last sexual partner, use of condoms during first sexual experience, use of condoms with the last partner, unplanned pregnancy, testing for sexually transmitted diseases (STDs) / HIV, experiences with STDs / HIV, sexual coercion, regret about the sexual experience, unwanted sexual experience, coercion tactics, commercial sex, sexuality education at school, sources of information, sources of social support.

Each of the topics listed has one or more questions offered, and a section with possible answers (e.g. No / Yes, once / Yes, more than once) is offered for each question. In relation to the type of questions asked, the answers offered are on a scale of nominal and ordinal type.

Data processing methods

Survey data were processed by the method of parametric and non-parametric statistics. Central tendency measures, dispersion measures, frequencies and percentages were calculated. The obtained results are presented graphically and in tabular form. In order to verify the set study aim, a chi-square test for an independent sample of respondents was applied

RESULTS AND DISCUSSION

Table 1 shows the comparison of the results with the variable "Have you ever been in love?". The results show that 70% of persons with disabilities and 73.3% of persons of typical development have been in love more than once. 20% of persons with physical disabilities and 23.3% of persons of typical development were in love only once, and 10% of persons with physical disabilities and 3.3% of persons of typical development were never in love. These results show that persons with and without physical disabilities have similar experiences when it comes to falling in love. In a study conducted by Wiegerink et al. (2010) results show that the vast majority of young people with cerebral palsy (94%) have been in love at least once.

Table 1. Comparison of the results with the variable "Have you ever been in love?"

Variables		Have you ever been in love?			Total
		No	Yes, once	Yes, more than once	
Physical disability	N	3	6	21	30
	%	10,0%	20,0%	70,0%	100,0%
Without disability	N	1	7	22	30
	%	3,3%	23,3%	73,3%	100,0%
Total	N	4	13	43	60
	%	6,7%	21,7%	71,7%	100,0%

$\chi^2=1,10$; $df=2$; $p= 0,577$

Table 2 shows the comparison of results between the sample respondents with the variable "Have you ever had a serious relationship?". The results show that there is an almost proportionate response rate of respondents with physical disabilities and respondents of typical development to claiming that they had a serious relationship more than once. Also, the results show that 50% of respondents with physical disabilities and 66.7% of respondents of typical development had at least once a serious relationship. It can be seen from the Table data that a higher percentage of respondents (20%) with physical disabilities did not have a serious relationship. In a study of adolescents with cerebral palsy and spina bifida, Blum et al. (1991) reported that only 7% of adolescents with disabilities had a relationship, as opposed to their peers (54%). Kokkonen et al. (1991) also reported sexual experiences of persons with cerebral palsy, and it was found that these persons had romantic dates much later, with about 50% of them never having a romantic date.

The results of the research conducted by Wiegering et al. (2008) show that 44% of respondents with cerebral palsy had a serious relationship with a man/woman, including a romantic date with them.

Table 2. Comparison of the results with the variable "Have you ever had a serious relationship?"

Variables		Have you ever had a serious relationship?			Total
		No	Yes, once	Yes, more than once	
Physical disability	N	6	15	9	30
	%	20,0%	50,0%	30,0%	100,0%
Without disability	N	2	20	8	30
	%	6,7%	66,7%	26,7%	100,0%
Total	N	8	35	17	60
	%	13,3%	58,3%	28,3%	100,0%

$\chi^2 = 2,77$; $df=2$; $p = 0,250$

A comparison of the results with the variable "Have you ever tried?" is shown in Table 3. The results show that 36.7% of persons with physical disabilities and 20% of persons of typical development did not try masturbation. French kissing was not experienced by 26.7% of persons with physical disabilities and 3.3% of persons of typical development. 23.3% of persons with disabilities and 10% of persons of typical development have never tried caressing. 40% of persons with disabilities and 30% of persons of typical development have not experienced the touching of another person's genitals. 36.7% of persons with physical disabilities and 20% of persons of typical development did not have sexual intercourse. Looking at the results of the chi-square test, it can be concluded that there is a statistically significant difference on the variable "French kissing". This result can be interpreted as meaning that, at the level of statistical significance, 0.05 persons of typical development experienced more of French kissing compared to persons with physical disabilities.

Kokkonen et al. (1991) conclude in their study that 54% of persons with cerebral palsy did not have sexual intercourse. The results of the research conducted by Wiegering et al. (2008) show that 50% of respondents with cerebral palsy had experienced masturbation.

Table 3. Comparison of the results with the variable "Have you ever tried?"

Variables		Persons with physical disabilities		Persons without disabilities	
		No	Yes	No	Yes
Masturbation	N	11	19	6	24
	%	36,7%	63,3%	20%	80%
French kissing	N	8	22	1	29
	%	26,7%	73,3%	3,3%	96,7%
Caressing	N	7	23	3	27
	%	23,3%	76,7%	10%	90%
Touching the other persons genitals	N	12	18	9	21
	%	40%	60%	30%	70%
Sexual intercourse	N	11	19	6	24
	%	36,7%	63,3%	20%	80%

$\chi^2_{(masturbation)} = 2,05$; $df=1$; $p = 0,152$; $\chi^2_{(French\ kissing)} = 6,40$; $df=1$; $p = 0,011$; $\chi^2_{(caressing)} = 1,92$; $df=1$; $p = 0,166$; $\chi^2_{(Touching\ the\ other\ persons\ genitals)} = 0,65$; $df=1$; $p = 0,417$; $\chi^2_{(Sexual\ intercourse)} = 2,05$; $df=1$; $p = 0,152$

Table 4 shows the comparison of the results with Sexual attraction. When asked "Are you attracted to men, women or both?", 33.3% of persons with physical disabilities said they are only attracted to men, 3.3% are attracted mostly to men, 6.7% are attracted mostly to women and 56.7% are only attracted to women. Of the total sample of persons (of typical development) without disabilities, 40% said they are only attracted to men, 10% are attracted to both men and women and 50% are only attracted to women. The results show that persons with physical disabilities do not show same-sex sexual attraction.

Table 4. Comparison of results with Sexual attraction

Variables		Are you attracted to men, women or both?					Total
		A	B	C	D	E	
Physical disability	N	10	1	0	2	17	30
	%	33,3%	3,3%	0,0%	6,7%	56,7%	100,0%
Without disability	N	12	0	3	0	15	30
	%	40,0%	0,0%	10,0%	0,0%	50,0%	100,0%
Total	N	22	1	3	2	32	60
	%	36,7%	1,7%	5,0%	3,3%	53,3%	100,0%

$\chi^2=6,30$; $df=4$; $p= 0,177$; Legend: A-only men, B-mostly men, C-both men and women, D-mostly women, E-only women

Table 5 shows the comparison of results with Sexual experience regrets. A proportionate percentage of respondents with physical disabilities and respondents of typical development never regretted kissing (73.3%), while a higher percentage of respondents with physical disabilities once regretted kissing (23.3%).

A higher percentage of respondents of typical development more than once regretted kissing compared to respondents with physical disabilities (20%). The results of the chi-square test showed that there was a statistically significant difference between respondents with physical disabilities and respondents of typical development in relation to the variable "Have you ever regretted kissing?" ($\chi^2=6,34$; $df=2$; $p= 0,042$). By looking at the distribution of the answers, it can be concluded that persons with disabilities at the significance level of 0.05 more regretted kissing. Looking at the remaining variables (Table 5), it can be seen that there is a statistically significant difference on the variable "Did you regret touching the genitals of another person?" ($\chi^2 = 4,28$; $df=1$; $p= 0,038$), that is, persons with physical disabilities at the level of significance 0.05 more regretted touching the genitals of another person.

Table 5. Sexual experience regrets

Did you regret:	No		Yes, once		Yes, more than once	
	N	%	N	%	N	%
Kissing?						
Physical disability	22	73,3	7	23,3	1	3,3
Without disability	22	73,3	2	6,7	6	20
Caressing?						
Physical disability	23	76,7	7	23,3	0	0
Without disability	26	86,7	2	6,7	2	6,7
Touching the genitals of another person?						
Physical disability	26	86,7	4	13,3	0	0
Without disability	30	100	0	0	0	0
Oral sex?						
Physical disability	24	80	5	16,7	1	3,3
Without disability	27	90	2	6,7	1	3,3
Sexual intercourse?						
Physical disability	12	63,2	6	31,6	1	5,3
Without disability	18	75	2	8,3	4	16,7
Anal sex?						
Physical disability	16	84,2	2	10,5	1	5,3
Without disability	18	75	5	20,8	1	4,2

χ^2 (kissing)= 6,34; df=2; p= **0,042**; χ^2 (caressing)= 4,96; df=2; p= 0,084; χ^2 (touching the genitals of another person)= 4,28; df=1; p= **0,038**; χ^2 (oral sex)= 1,46; df=2; p= 0,481; χ^2 (sexual intercourse)= 4,47; df=2; p= 0,107; χ^2 (anal sex)= 0,83; df=2; p= 0,659;

Table 6 shows the results in relation to the experience of sexual relations against one's will. The results show that a higher percentage of respondents with physical disabilities once experienced sexual relations against their will than respondents (of typical development) without disabilities: kissing (33,3%), caressing (20%), touching the genitals of another person (13,3%), oral sex (10%), sexual intercourse (21,1%) and anal sex (15,8%). The results of the chi-square test showed that there was a statistically significant difference on the variables "Have you experienced kissing against your will?" (p=0,009) and "Have you experienced caressing against your will?" (p=0,016). Based on the obtained results, it can be concluded that persons (of typical development) without disabilities at the significance level 0.05 experienced kissing against their will, while persons with physical disabilities at the significance level 0.05 experienced touching the genitals of another person against their will.

Table 6. The experience of sexual relations against one's will

Have you experienced against your will:	No		Yes, once		Yes, more than once	
	N	%	N	%	N	%
Kissing?						
Physical disability	23	76,7	7	23,3	0	0
Without disability	24	80	1	3,3	5	16,7
Caressing?						
Physical disability	24	80	6	20	0	0
Without disability	28	93,3	0	0	2	6,7
Touching the genitals of another person?						
Physical disability	26	86,7	4	13,3	0	0
Without disability	30	100	0	0	0	0
Oral sex?						
Physical disability	27	90	3	10	0	0
Without disability	30	100	0	0	0	0
Sexual intercourse?						
Physical disability	15	78,9	4	21,1	0	0
Without disability	21	87,5	1	4,2	2	8,3
Anal sex?						
Physical disability	16	84,2	3	15,8	0	0
Without disability	22	91,7	1	4,2	1	4,2

$\chi^2_{(kissing)} = 9,52$; $df=2$; $p= 0,009$; $\chi^2_{(caressing)} = 8,30$; $df=2$; $p= 0,016$; $\chi^2_{(touching\ the\ genitals\ of\ another\ person)} = 4,28$; $df=1$; $p= 0,038$; $\chi^2_{(oral\ sex)} = 3,15$; $df=1$; $p= 0,076$; $\chi^2_{(sexual\ intercourse)} = 4,27$; $df=2$; $p= 0,118$; $\chi^2_{(anal\ sex)} = 2,39$; $df=2$; $p= 0,301$;

CONCLUSION

Considering the results of the research, it can be concluded that persons (of typical development) without disabilities experienced more French kissing but also regretted kissing. Persons (of typical development) without disabilities have experienced kissing against their will, while persons with physical disabilities have experienced the touching of the genitals of another person against their will. In general, the results suggest that the sexuality of persons with physical disabilities should be approached carefully and thoughtfully given the sensitivity of the topic, and special attention should be paid to education where sources of information on sex need not be superficial or contain incorrect information. Also, special attention should be paid to education on the consequences of having sexual contacts against the will of the individual.

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THE UNDERSTANDING OF REVERSIBLE SENTENCES IN PERSONS WITH APHASIA

RAZUMIJEVANJE REVERZIBILNIH REČENICA U OSOBA SA AFAZIJOM

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ABSTRACT

The main goal of this study was to examine and analyze the abilities of the understanding of reversible sentences in persons with aphasia caused by stroke. The study was conducted on a random sample of 25 patients/respondents who had a stroke and who were diagnosed by neurological examination and speech-language therapist examination of a speech and language disorder defined as aphasia. The control group consisted of the same number of respondent, but without aphasia. The assessment of reversible sentences comprehension in patients/respondents was performed using a Reversible Sentences Comprehension Test (Byng and Black, 1999). Analysis of the research results showed that there are significant differences in abilities of understanding reversible sentences between persons with aphasia and those without aphasia. Persons with aphasia have difficulties in understanding reversible sentences. These difficulties can be of varying shape and intensity, from severe to milder interference. Persons with Wernicke's aphasia suffer from the majority of difficulties and persons with anomic aphasia have the least difficulties.

Key words: aphasia, abilities of understanding, reversible sentences.

SAŽETAK

Glavni cilj istraživanja bio je da se ispituju i analiziraju sposobnosti razumijevanja reverzibilnih rečenica u osoba sa afazijom uzrokovanom moždanim udarom. Istraživanje je provedeno na slučajnom uzorku od 25 ispitanika kojima je nakon moždanog udara neurološkim i logopedskim pregledom dijagnosticiran govorno-jezičke poremećaj definiran kao afazija. Kontrolnu grupu činio je isti broj ispitanika bez afazije. Procjena sposobnosti razumijevanja reverzibilnih rečenica kod ispitanika obavljena je pomoću Testa razumijevanja reverzibilnih rečenica (Byng and Black, 1999).

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Analizom rezultata istraživanja utvrđeno je da postoje značajne razlike u sposobnostima razumijevanja reverzibilnih rečenica između osoba sa afazijom i osoba bez afazije. Osobe sa afazijom imaju teškoće u razumijevanju reverzibilnih rečenica. Te teškoće mogu biti različitog oblika i intenziteta, od težih do blažih. Najviše teškoća imaju osobe sa Wernicke-ovom afazijom, a najmanje sa anomičkom.

Ključne riječi: afazija, sposobnosti razumijevanja, reverzibilne rečenice.

INTRODUCTION

From the time of the origin of the original forms of speech and language to the present day, various disorders of speech and language, or communication, have occurred in a number of people and children. One of the most severe disorders is aphasia, which is a very complex disorder that disrupts what is most important in a person as a social being - the ability to communicate. Aphasia is a disorder that results from damage to the parts of the brain responsible for the language. For most people, these areas are located in the left hemisphere of the brain. Aphasia usually occurs suddenly, often after a stroke or head injury, but it can also develop slowly as a result of a brain tumour or progressive neurological disease (National Institute on Deafness and Other Communication Disorders, 2015). It affects the ability to communicate using language including speech, understanding the speech of others, reading, writing, gesturing, using numbers, but not affecting intelligence (National Aphasia Association, 2019). Today, in literature, numerous definitions of aphasia can be found, as a result of relatively different approaches to defining this speech and language disorder. One of the more modern definitions is the one stated by author Darley (1982), according to which aphasia is a "selective impairment of a cognitive system specialized in understanding and formulating language with relatively preserved other cognitive abilities" (according to Davis, 2007). Understanding reversible sentences in persons with aphasia is a modality on which, among other things, the possibilities of producing sentences depend. What if a person with aphasia really cannot understand with certainty that the phrase "Marko called a woman" has a something different meaning than "A woman called Marko"? There may be several reasons for the problem here. Only simple reversible sentences are covered in this paper. Reversible sentences are those sentences in which one person does something to another, or in which a subject changes the owner (reversible sentences). Some sentences are more difficult to process than others. Although the overall complexity of a sentence can be modulated in terms of its grammatical structure, there are additional features that can increase the complexity of a sentence. The prominent classes of such sentence types are semantically reversible sentences (e.g. "The leopard ran past a young lion"). These sentences have the interesting feature that when the subject (leopard) and object (lion) change places ("The lion ran past a young leopard"), the sentences remain meaningful, although the exact meaning of the sentence has changed. In contrast, in non-reversible sentences (e.g. "The dog is chewing on bones") the substitution of the subject (dog) and object (bones) gives a sentence with no true meaning ("The bones are chewing on a dog"). Accordingly, the subject and object of reversible sentences can change places and still produce a meaningful sentence, while non-reversible sentences become semantic anomalies when reversed (Richardson, Thomas and Price, 2010).

The main objective of this study was to examine the ability of reversible sentences understanding in persons/respondents with aphasia caused by a stroke, and to compare them with the same abilities in persons/respondents without aphasia. We were also interested in the impact of aphasic syndrome type on the ability to understand reversible sentences. However, this paper does not cover many aspects of sentence understanding, which opens up opportunities and the need for further research, discussion, and debate on this complex topic.

RESEARCH MATERIAL AND METHODS

Sample of respondents

In this study, the experimental group consisted of 25 respondents who were diagnosed with a communication disorder known as aphasia, after a neurological and speech therapy examination. There were 13 male and 12 female respondents in the experimental group. The age of the respondents suffering from aphasia ranged from 41 to 79 years with an average of 62.7 ± 9.7 years. In relation to the type of stroke, there were 22 respondents who had an ischemic stroke and 3 respondents who had an intracerebral hemorrhage. The control group consisted of the same number of respondents, but without aphasia. The groups of respondents were approximately equal in gender ($\chi^2 = 0.080$; $p = 0.777$) and age ($t = 0.014$; $p = 0.989$).

Method of conducting research

The study was conducted on a sample of respondents hospitalized at the University Clinical Centre Tuzla at the Clinic for Neurology - Department of Cerebrovascular Diseases, at the Clinic for Ear, Throat and Nose Diseases - Department of Audiology-Phoniatics and Public Health Institution Health Centre Tuzla - Department of Pathology of Hearing, Voice and Speech. The study had the characteristics of a prospective study, and was conducted using an examination method. The primary data obtained through the direct application of the test were used in accordance with the set research objectives. All respondents were individually examined. The criteria for selecting respondents were:

- persons diagnosed with aphasia caused by a stroke;
- persons who had a completely adopted and normal speech and language system prior to the disorder;
- persons who have relatively unimpaired abilities to derive semantic information based on the image of objects or people.

Measuring instruments

The criterion for selecting respondents who have relatively unimpaired abilities to derive semantic information based on the image of an object or people was determined based on The Pyramids and Palm Trees Test (Howatrd and Patterson, 1992). All respondents with aphasia had five or fewer errors/wrong answers on this test, which is close to the results of the control group respondents.

type of aphasic syndrome was determined using the Boston Diagnostic Aphasia Examination – BDAE, Short form (Goodglass, Kaplan and Barresi, 2001). Assessment of respondents' ability to understand reversible sentences was performed using the Reversible sentence comprehension test (Byng and Black, 1999). The purpose of this Test is to test whether the respondents understands reversible active sentences with a set of verbs, adjectives, and prepositions in the predicate composition. In order for the task to be done correctly, the respondent must choose the appropriate image after hearing or seeing the sentence. He/she has to form a representation of that sentence and memorize it until he/she finds the picture. When images are displayed, each one should be interpreted and the event or condition chosen to be presented. The representation of the picture is compared with the given sentences and the decision on the best pair is made. Thus, the task involves both linguistic and non-linguistic analysis, and requires the ability to memorize and compare linguistic and non-linguistic representations.

The test consists of 40 items. On each item there is a vertical series of three pictures of the same format: the target picture, the picture of the inverted roles, and the picture that is a lexical interference. After explaining the testing procedure, the examiner tells the target sentence, and then the item with three pictures is represented to the respondent, from which he / she should select the one that most closely matches the spoken sentence. Target sentences are divided into 4 groups:

- *sentences containing action verbs* that express the action and attribute the thematic role to the subject, and the topics to the object. There are 10 target sentences (e.g. *The clown scolds the astronaut; The astronaut photographs the clown; etc.*).
- *sentences containing non-action verbs* that express perceptual or psychological states. There are 10 target sentences (e.g. *The clown dreads the astronaut; The dancer surprises the cook; etc.*).
- *sentences containing adjectives* that express psychological states or moods. There are 10 target sentences (e.g. *The boxer is sad about the cowboy; The swimmer is cruel to the workman; etc.*).
- *sentences containing locative prepositions* such as: in, on, below, inside, above, after, on top, below, behind. There are 10 target sentences (e.g. *The bag is inside the shoe; The boy is behind the queen; etc.*).

One point is awarded for each correct answer, that is, the respondent is left with no points for incorrect answer or when there is no answer. Accordingly, the score range ranges from 0 to 40 points. The correct answers in the action verbs category (from 0 to 10 points), the correct answers in the non-action verbs category (from 0 to 10 points), the correct answers in the adjectives category (from 0 to 10 points), and the correct answers in the locative prepositions category (0 to 10 points) are particularly evaluated, which, in total, gives the total number of points in the Reversible Sentences Comprehension Test.

Data processing methods

After the research, the obtained data were processed by the computer statistical program SPSS 16.0 for the Microsoft Windows operating system. Univariate statistical methods were used in statistical data processing, and in accordance with the defined research objectives. For all variables observed, basic statistical parameters were calculated: range of results, minimum and maximum results, arithmetic mean and standard deviation. A t-test, univariate analysis of variance (ANOVA) with multiple comparisons using Tukey test was used to determine the significance of differences. The statistical significance and the nature of the correlation between the observed variables were established by using the Pearson coefficient.

RESULTS AND DISCUSSION

Distribution of respondents by type of aphasic syndrome

The sample respondents were diagnosed with 4 aphasic syndromes: Broca's aphasia, anomic aphasia, Wernicke's aphasia and conductive aphasia. The most common was Broca's aphasia, diagnosed in 9 respondents, followed by anomic aphasia, diagnosed in 7 respondents, Wernicke's aphasia, diagnosed in 5 respondents and, the least represented, conductive aphasia, diagnosed in 4 respondents. The distribution of respondents according to the type of aphasic syndrome is shown in Figure 1.

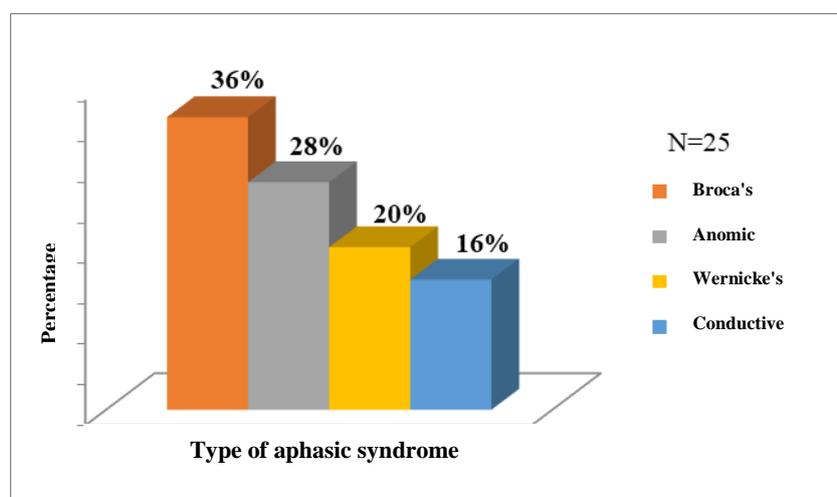


Figure 1. Distribution of respondents in relation to type of aphasic syndrome

Basic statistical parameters of the observed variables in the experimental group

The results of the descriptive statistics of the observed variables of the understanding of reversible sentences are presented in Table 1. The result of the Reversible Sentences Comprehension Test ranged from 6/40 to 33/40 points. Respondents with aphasia achieved a total of 536 out of a maximum of 1000 points, that is, they correctly completed more than 50% of the assigned tasks. The mean of the Reversible Sentences Comprehension Test was 21.44 points with a standard deviation of 7.159.

Most errors/wrong answers are noted on the tasks of understanding reversible sentences containing non-action verbs. Respondents had a total of 97 correct answers on this variable, that is, 153 errors. On the tasks of understanding reversible sentences containing action verbs, the respondents achieved an average of 6.56 points, with 164 correct answers, or 86 errors/wrong answers. The fewest errors/wrong answers were noted on the tasks of understanding reversible sentences containing locative prepositions, where the respondents had a total of 171 correct answers, that is, 79 errors/wrong answers. Respondents with aphasia also made a lot of mistakes on tasks of understanding reversible sentences containing adjectives, with 104 correct answers and 146 errors/wrong answers. Richardson, Thomas, and Price (2010) state that semantically reversible sentences are subject to misinterpretation and take more time for children and adults of typical development to understand. Reversible sentences are difficult especially for those with language difficulties such as aphasia or specific language impairment.

Table 1. Abilities to understand the reversible sentences of persons with aphasia

Variable	N	Range	Minimum	Maximum	Total	AM	SD
GLR	25	9	1	10	164	6.56	2.518
GLNR	25	4	2	6	97	3.88	1.333
PRI	25	5	2	7	104	4.16	1.344
LPRE	25	9	1	10	171	6.84	2.593
UKRRR	25	27	6	33	536	21.44	7.159

Legend:

- GLR - the number of correct answers to the tasks of understanding reversible sentences containing action verbs
- GLNR - the number of correct answers to the tasks of understanding reversible sentences containing non-action verbs
- PRI - the number of correct answers to the tasks of understanding reversible sentences containing adjectives
- LPRE - the number of correct answers to the tasks of understanding reversible sentences containing locative prepositions
- UKRRR - the total test result
- AM - arithmetic mean
- SD - standard deviation
- N - number of respondents

Differences in ability to understand reversible sentences between groups

Analyzing the results of understanding the reversible sentences, it was found that the respondents with aphasia performed poorly on all observed variables compared to the control group respondents. The relation of the results obtained is shown in Figure 2. Using the t-test, it was found that there were statistically significant differences between these groups of respondents in their ability to understand reversible sentences containing action verbs ($p = 0.017$), reversible sentences containing non-action verbs ($p = 0.000$), reversible sentences containing adjectives ($p = 0.000$), and on the overall result of the Reversible Sentences Comprehension Test ($p = 0.000$). Thus, aphasia significantly affects the ability to understand reversible sentences (Table 2). However, the differences did not prove statistically significant on the variable "number of correct answers to the task of understanding reversible sentences containing locative prepositions" ($p = 0.058$).

In cases where respondents with aphasia make significantly more reversible errors than the control group, and if those errors/wrong answers are most pronounced on the tasks of understanding reversible sentences containing non-action verbs and adjectives, Black, Nickels, and Byng (1991) state that this is a semantic / conceptual problem or the problem of transferring between a linguistic and pictorial representation.

Table 2. Significance of differences in the understanding of reversible sentences between groups

Variable	Group	N	AM	SD	t	p _{sig}
GLR	Experimental	25	6.56	2.518	2.481	0.017*
	Control	25	7.96	1.274		
GLNR	Experimental	25	3.88	1.333	6.389	0.000*
	Control	25	6.36	1.411		
PRI	Experimental	25	4.16	1.344	7.423	0.000*
	Control	25	7.04	1.399		
LPRE	Experimental	25	6.84	2.593	1.945	0.058
	Control	25	8.00	1.472		
UKRRR	Experimental	25	21.44	7.159	4.558	0.000*
	Control	25	29.36	4.923		

Respondents without aphasia scored a total of 734/1000 points, with a mean of 29.36 and a standard deviation of 4.923. Therefore, they scored 198 points more than the respondents with aphasia, with the standard deviation significantly lower. Most errors/ wrong answers were noted on the tasks of understanding reversible sentences containing non-action verbs and on the tasks of understanding reversible sentences containing adjectives. The least errors/wrong answers were noted on the tasks of understanding reversible sentences containing locative prepositions where the respondents had a total of 200 correct answers, that is, 50 errors/wrong answers. There were 51 errors/wrong answers on the tasks of understanding reversible sentences containing action verbs in respondents without aphasia. Byng and Black (1999) tested the ability to understand reversible sentences on a sample of 21 respondents without aphasia, three of whom were younger than 20, three in their fifties, nine in their sixties, five in their seventies, and one in their eighties. There were 19 females and 2 males in terms of gender. Based on the results of the research, it is concluded that respondents without aphasia could successfully complete this task, that is, they made much more correct than wrong answers. They made more reversible mistakes than mistakes with lexical interference. Black, Nickels and Byng (1991) state that the accuracy of responses when testing the ability to understand reversible sentences of respondents without aphasia is influenced by the semantic properties of the predicates in the sentences and / or their representation in the pictures. These respondents have made more errors/wrong answers in verbs and adjectives that express a psychological state than in sentences containing action verbs or locative prepositions. The same authors argue that the reversible errors of respondents without aphasia are not errors in sentence interpretation, but reflect the processes that take place after sentence interpretation, in transferring sentence interpretation to picture recognition.

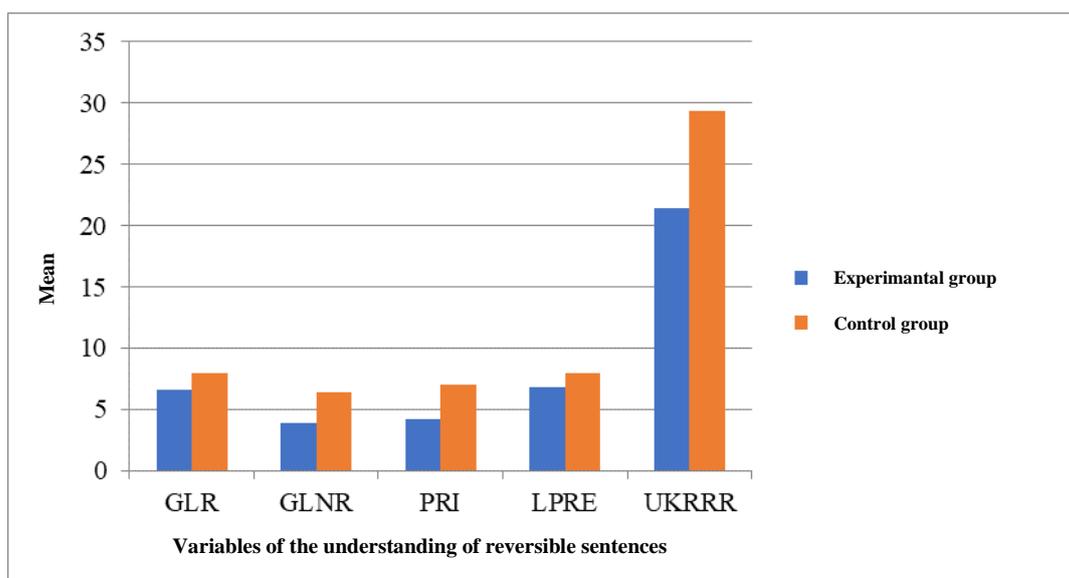


Figure 2. Abilities to understand the reversible sentences in persons with aphasia and persons without aphasia

Differences in the ability to understand reversible sentences in relation to the type of aphasic syndrome

The significance of differences in the ability to understand reversible sentences in relation to the type of aphasic syndrome was determined by analysis of variance, and the results are presented in Table 3.

Table 3. Differences in understanding reversible sentences in relation to the type of aphasia

Variables		Sum of Squares	df	Mean Square	F-ratio	p _{sig}
GLR	Between groups	74.293	3	24.764	6.679	0.002*
	Within groups	77.867	21	3.708		
	Total	152.160	24			
GLNR	Between groups	22.951	3	7.650	8.160	0.001*
	Within groups	19.689	21	0.938		
	Total	42.640	24			
PRI	Between groups	21.093	3	7.031	6.631	0.003*
	Within groups	22.267	21	1.060		
	Total	43.360	24			
LPRE	Between groups	79.473	3	26.491	6.794	0.002*
	Within groups	81.887	21	3.899		
	Total	161.360	24			
UKRRR	Between groups	661.988	3	220.663	8.156	0.001*
	Within groups	568.172	21	27.056		
	Total	1230.160	24			

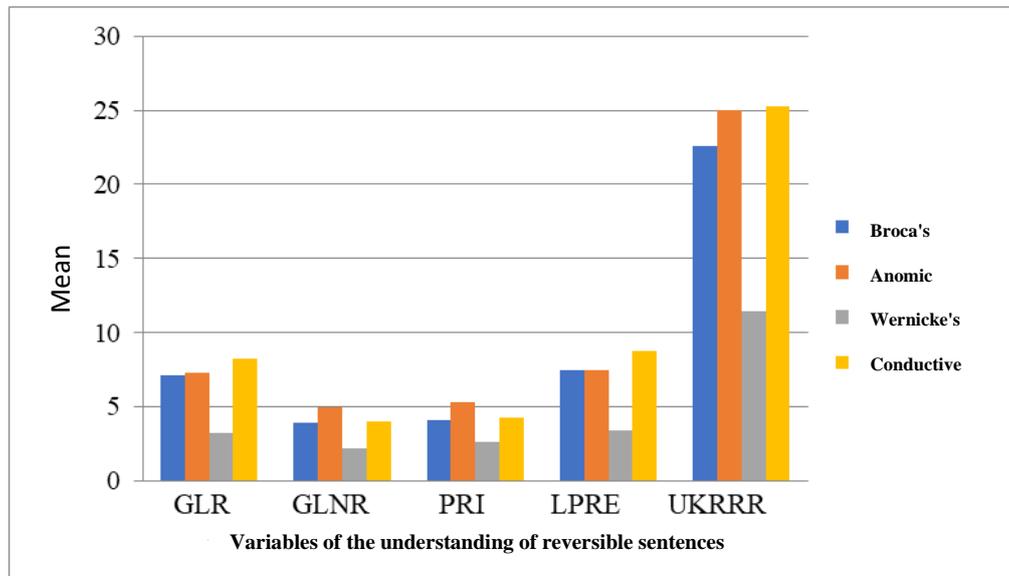


Figure 3. Understanding reversible sentences in relation to type of aphasic syndrome

It was found that there were statistically significant differences on all five observed variables between respondents with different aphasic syndromes. Figure 3 graphically shows the mean values of the reversible sentence comprehension variables for respondents with different aphasic syndromes. Respondents diagnosed with Wernicke's aphasia achieved the lowest scores on all observed variables. The best results were achieved by subjects with conductive and anomic aphasia. After applying multiple comparisons using the Tukey test, data were obtained indicating the following:

- the ability to understand reversible sentences on all observed variables in respondents with anomic aphasia was statistically significantly better only in relation to respondents with Wernicke's aphasia ($p = 0.001$), whereas in relation to respondents with Broca's aphasia and conductive aphasia the differences did not show to be statistically significant ($p < 0.05$);
- the ability to understand reversible sentences containing action verbs, non-action verbs, locative prepositions, and abilities related to the total score of the reversible sentence comprehension test in respondents with Broca's aphasia were statistically significantly better only in relation to respondents with Wernicke's aphasia, while on the tasks of understanding reversible sentences containing adjectives, the differences between these two aphasic syndromes did not prove statistically significant ($p = 0.069$);
- the ability to understand reversible sentences containing action verbs and locative prepositions, and the abilities related to the total score of the reversible sentence comprehension test in respondents with conductive aphasia are statistically significantly better in relation to respondents with Wernicke aphasia, while on the tasks of understanding reversible sentences containing adjectives and non-verbs, the differences between these two aphasic syndromes did not prove statistically significant.

The results of the study are expected given that the division of aphasia into different aphasic syndromes is based on the different phenomenology and symptomatology of speech and language disorders. Aphasia implies linguistic impediments in the first place, but there are also changes in personality behaviour and in its emotional and intellectual sphere (Vladislavjević, 1983). The basic signs of aphasia are: naming disorders, paraphasia production, speech fluency disorders, repetitive disorders, auditory comprehension disorders, grammatical processing disorders, reading and writing disorders and apraxia (Damasio, 1991a). The basic features of Broca's aphasia are non-fluent, hesitant spontaneous speech characterized by incomplete and syntactically simplified and agrammatic sentences, reduced phrase length, altered prosody, and difficult articulation (Vuković, 2002). In patients with Broca's aphasia, auditory comprehension is better than verbal production, but it is rarely preserved, and the comprehension of grammatically meaningful structures is particularly impaired (Benson and Ardila, 1996). The basic features of Wernicke's aphasia are fluent but paraphasic speech, impaired auditory comprehension, impaired repetition of words and sentences, and commonly impaired reading and writing abilities and rare hemiparesis (Graham, 1990).

Anomic aphasia is characterized by fluent speech, a relatively normal auditory comprehension of speech, preserved ability to repeat words, but with marked difficulty in finding words. Naming ability and reading and writing abilities are mostly impaired. In more severe cases, there is a hesitant speech, that is, the patients speak hesitantly, they barely speak the word spontaneously, answer with short questions only, with the inability to continue the conversation actively (Golubović, 1996). Damasio (1991b) identified specific areas in the left temporal lobe that are responsible for evoking/recalling words. Damage to areas 21, 20 and 38 reduces the ability to recall words without grammatical or phonemic difficulties. Damage to the area 38 alone causes deficits in the ability to remember names, but not common names, while damage to areas 21 and 20 causes deficits in both cases. The ability to recall other categories of words (verbs, articles, etc.) is not compromised. The basic features of conductive aphasia are fluent speech, but usually impecunious in relation to that of Wernicke's aphasia, minor impaired auditory comprehension with dominant impairments during repetition of words and sentences (Zečić, 2002). Benson et al. (1973), suggested three basic and five other characteristics of conductive aphasia. The basic characteristics are: 1. fluent, paraphasic conversational speech, paraphrases are usually literary; 2. approximately normal understanding; significantly impaired repetition of words. The five other characteristics that do not occur in all cases of conductive aphasia are: 1. impaired naming; 2. reading disorder, especially reading aloud; 3. writing disorder; 4. ideomotor apraxia; 5. basic neurological abnormalities, hemiparesis of the dominant side (according to Benson and Ardila, 1996). The ability to process sentences, to perceive occurrences and to produce verbs, and to understand reversible sentences are complex processes that depend on a number of factors. Understanding a sentence implies the meaning of all words and their relationships. How words relate to each other is also determined by factors such as the position in the sentence (word order), how their basic meaning changes with the addition of adverbs, auxiliaries and other elements, as well as aspects of the meaning of the words themselves (Black, Nickels, & Byng, 1991).

Agrammatism is characterized by comprehension deficits associated with the inability to understand sentences for which syntax comprehension is crucial to comprehending sentence meaning (e.g. in reversible sentences where the subject and object of the action are both animated (Edmonds, 2005).

Interrelationship between observed variables of the understanding of reversible sentences

To determine the relationship between the observed variables and the nature of this relationship in the experimental group, Pearson's correlation analysis was used. Table 4 shows the results of the correlation analysis between the variables of the understanding of reversible sentences. A correlation was found between all variables of the understanding of reversible sentences at a significance level of 1%. All realized correlations are of a positive sign, which indicates that by increasing the ability on one variable, the ability on the other variable increases and vice versa.

Table 4. Correlation of the observed variables in the sample of respondents with aphasia

Variables		GLR	GLNR	PRI	LPRE	UKRRR
GLR	r (Pearson)	1.000	0.679	0.723	0.978	0.968
	p _{sig}		0.000**	0.000**	0.000**	0.000**
	N	25	25	25	25	25
GLNR	r (Pearson)	0.679	1.000	0.941	0.633	0.831
	p _{sig}	0.000**		0.000**	0.001**	0.000**
	N	25	25	25	25	25
PRI	r (Pearson)	0.723	0.941	1.000	0.665	0.858
	p _{sig}	0.000**	0.000**		0.000**	0.000**
	N	25	25	25	25	25
LPRE	r (Pearson)	0.978	0.633	0.665	1.000	0.949
	p _{sig}	0.000**	0.001**	0.000**		0.000**
	N	25	25	25	25	25
UKRRR	r (Pearson)	0.968	0.831	0.858	0.949	1.000
	p _{sig}	0.000**	0.000**	0.000**	0.000**	
	N	25	25	25	25	25

The strongest correlation was found between the variables "number of correct answers to the task of understanding reversible sentences containing action verbs" and "number of correct answers to the task of understanding the reversible sentences containing locative prepositions", with a very high correlation coefficient $r = 0.988$. The lowest correlation coefficient was observed between the variables "number of correct answers to the task of understanding reversible sentences containing non-action verbs" and "number of correct answers to the task of understanding reversible sentences containing locative prepositions" ($r = 0.633$ - medium-strong correlation).

CONCLUSION

The study results conclude that respondents with aphasia had significantly lower ability to understand reversible sentences than respondents without aphasia. In the Reversible Sentences Comprehension Test, respondents with aphasia correctly solved 53.6% of assigned tasks, unlike respondents without aphasia who solved 73.4% of tasks in the same test. The most difficulties in respondents with aphasia occur in the tasks of understanding reversible sentences containing non-action verbs, and the least difficulties occur in understanding the reversible sentences containing locative prepositions. The type of aphasic syndrome significantly affects the ability to understand reversible sentences. Respondents with Wernicke's aphasia have the most difficulties, and respondents with anomic aphasia have the least difficulties. Correlation analysis revealed the relationship between all variables of the understanding of reversible sentences in persons with aphasia, and all realized correlations are of a positive sign.

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ANALYSIS OF UNEMPLOYMENT OF PERSONS WITH DISABILITIES IN THE TUZLA CANTON (2000-2019)

ANALIZA NEZAPOSLENOSTI OSOBA S INVALIDITETOM NA TUZLANSKOM KANTONU OD 2000-2019 GODINE

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ABSTRACT

The key problem for persons with disabilities in our region is unemployment. Unemployment is a phenomenon that indicates that persons are not in accordance with their abilities, knowledge and skills, able to find employment and receive a reasonable salary. One way to measure unemployment is through data collected by employment services. Therefore, the aim of the paper was the collection and analysis of data on unemployment trends of persons with disabilities obtained from the Employment Service of Tuzla Canton. The analysis of data in the paper presents the results of unemployment trends from 2005 to 2019, as well as the structure of unemployment of persons with disabilities by gender, age, educational level, status of disability and municipalities in the Tuzla Canton. The data obtained indicate that from 2000 to 2019 there was a decrease in the number of unemployed persons and that employment of persons with disabilities was increasing. These results are supported by active employment measures, but also by the trend of people leaving the state for employment in Western countries.

Key words: unemployment, disability, Tuzla Canton

SAŽETAK

Ključni problem osoba s invaliditetom na našim prostorima je nezaposlenost. Nezaposlenost je pojava koja ukazuje da osobe nisu sukladno svojim sposobnostima, znanjima i vještinama, u mogućnosti naći zaposlenje i primati primjerenu platu. Jedan od načina mjerenja nezaposlenosti su podaci koje sakupljaju zavodi za zapošljavanje. S toga je i cilj rada bio prikupiti i analizirati podatke o kretanju nezaposlenosti osoba s invaliditetom dobivene od Službe za zapošljavanje Tuzlanskog kantona.

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Analizom podataka u radu su prezentirani rezultati kretanja nezaposlenosti od 2005 do 2019 godine, te struktura nezaposlenosti osoba s invaliditetom prema spolu, dobi, stepenu obrazovanja, statusu invalidnosti i općinama na Tuzlanskom kantonu. Dobiveni podaci ukazuju da je od periodu od 2000. godine do 2019. godine, došlo do smanjivanja broja nezaposlenih osoba, te da je zapošljavanje osoba s invaliditetom u porastu. U prilog ovakvih rezultata govore i aktivne mjere zapošljavanja, ali i trend odlaska osoba u potrazi za zaposlenjem u zapadne zemlje.

Ključne riječi: nezaposlenost, invaliditet, Tuzlanski kanton

INTRODUCTION

The key problem for persons with disabilities in our region is unemployment. Unemployment is a phenomenon that indicates that persons are not in accordance with their abilities, knowledge and skills, able to find employment and receive a reasonable salary. According to directives of the *International Labour Organisation* (ILO), the standard international definition of unemployment includes all persons over the age range determined to measure the economically active population who were unemployed during the reference period, were available for work at any time during the reference period, and were seeking employment (taking certain steps to find a job). Thus, the criteria on which the standard definition of unemployment is based relate only to an individual's activity during the reference period. All three criteria must be met simultaneously (Birsá, 2002). The criterion "jobless" serves to draw a clear line between employment and unemployment and to ensure that the two concepts are mutually exclusive. According to this criterion, a person will be unemployed if he or she has not worked even for one hour during the observation period, i.e. if he or she has been completely absent from work. The criterion "immediate availability for employment" means that a person must be able and willing to work if given a job/employment opportunity, which excludes those who cannot accept work because of certain obstacles (such as family responsibilities or illness) and job seekers who would start after a certain time (such as job seekers after graduation). The criterion "job-seeking" refers to the condition of active job search, which implies taking certain steps with the aim of finding paid employment or self-employment, not just an official statement of a person to look for a job (Relja et al., 2011). Structural changes in the labour market caused by globalization and modern technology, whose development is accelerating to an unpredictable scale, as well as financial and economic crises and an aging population, result in high permanent unemployment, with which governments around the world are fighting hard, without the prospect that in the near future they can achieve visible results (Buila, 2016). The labour force does not meet the needs of the modern market in a time of rapid technical and technological development. Completing an education and training for a particular occupation and job, or for obtaining a certain title, does not mean getting a definitive job or being permanently employed, because the modern labour market offers new challenges and requirements that require continuous improvement and acquisition of new knowledge and skills in line with today's needs (Perin, 2008). Training improves the qualification structure of job seekers, which also enhances their professional mobility and employment opportunities.

At the same time, education helps the unemployed to make the most of their unemployment time and preserve their previously acquired knowledge and skills (Bejaković, 1998). Persons with disabilities belong to the so-called vulnerable group of persons, and speaking in the context of their employment, they belong to a group of hard-to-employ persons (Kiš-Glavaš, 2009). In March 2010, Bosnia and Herzegovina became a member state of the UN Convention on the Rights of Persons with Disabilities (CRPD or Convention) and the Optional Protocol to the Convention. Bosnia and Herzegovina has pledged to the CRPD the responsibility of taking all measures, endeavouring to promote, protect and ensure full and equal enjoyment of all human rights for all persons with disabilities, without any form of discrimination on the basis of disability (Ćerimović, 2012). Article 27 of the Convention on the Rights of Persons with Disabilities (United Nations, 2006) emphasizes the right for persons with disabilities to equal basis work/employment with other persons, including the right to earn a living from freely chosen or accepted work/job in the labour market and the working environment that is open, inclusive and accessible to persons with disabilities. In order for persons with disabilities to be able to get employed, the help of society is certainly needed, which is part of the social policy and general policy directed at persons with disabilities. Active and passive measures are being implemented to alleviate unemployment. Active measures, among other things, provide the unemployed with the acquisition of new knowledge and skills and information for finding a job, while passive measures mostly relate to substantive rights during unemployment. There are usually two ways to measure unemployment. The first is data from the Labour Force Survey, whose methodology is in line with the rules of the International Labour Organization (ILO) and the European Bureau of Statistics (Eurostat). Another way of measuring unemployment is by collecting data collected and processed by employment services. Therefore, the aim of this paper is to present the unemployment of persons with disabilities in the Tuzla area in the past 19 years. The paper will show the number of unemployed persons with disabilities in relation to gender, age, level of education, status of disability and municipalities in Tuzla Canton, as well as active measures provided to unemployed persons with disabilities.

MATERIAL AND METHODS

Sample of participant

The survey population is comprised of all persons with disabilities who are registered in the protocol of the Employment Service of Tuzla Canton.

Method of conducting research

The survey was conducted between November and December 2019. Data on the number of unemployed persons and active employment measures for persons with disabilities were collected from the Employment Service of Tuzla Canton. The Questionnaire and the Request for access to information were presented by the interviewers (students of PDS-motor disorders and chronic diseases, Faculty of Education and Rehabilitation) in November to a selected public institution. Within 15 days, the public institution granted access to the information and provided the available information.

Measuring instruments

A Questionnaire was created for research purposes. The Questionnaire referred to the collection of general data on unemployed persons with disabilities. The first block of questions pertains to socio-demographic characteristics, which included: the gender and age structure of the respondents, the municipality where the unemployed persons live, and the educational structure of the respondents. The second block of questions addresses issues specific to persons with disabilities, namely: disability status and types of restrictions. The third block of questions contains the collection of data on active employment measures.

Data processing methods

The obtained data were processed by the method of descriptive statistics.

RESULTS AND DISCUSSION

Bosnia and Herzegovina is a country that is facing a major unemployment problem both among the general population and among the disabled. Table 1 provides an overview of unemployed persons with disabilities who were registered in the protocol of the Employment Service in November 2019 in the Tuzla Canton. The obtained data are presented in relation to educational level, gender, and number of unemployed persons in the municipalities of Tuzla Canton.

Table 1. Overview of unemployed persons with disabilities by municipalities, gender and educational level for November 2019

Persons with disabilities	Total	Educational level							
		VSS	VŠS	SSS	NSS	VKV	KV	PKV	NKV
Banovići Total	13	0	0	1	0	0	5	0	7
RVI Women	0	0	0	0	0	0	0	0	0
Banovići Total	58	1	1	4	0	0	30	10	12
OSI Women	28	1	1	2	0	0	14	4	6
Čelić Total	51	0	0	0	0	0	17	3	31
RVI Women	0	0	0	0	0	0	0	0	0
Čelić Total	5	0	0	0	0	0	0	3	2
OSI Women	0	0	0	0	0	0	0	0	0
Doboj Istok Total	29	0	0	2	0	0	13	1	13
RVI Women	0	0	0	0	0	0	0	0	0
Doboj Istok Total	41	0	0	8	0	0	18	0	15
OSI Women	15	0	0	6	0	0	5	0	4
Gračanica Total	51	0	1	2	0	1	17	7	23
RVI Women	0	0	0	0	0	0	0	0	0
Gračanica Total	89	0	2	6	0	1	36	11	33
OSI Women	30	0	1	4	0	0	18	1	6
Gradačac Total	94	0	0	5	0	0	30	12	47
RVI Women	2	0	0	0	0	0	1	0	1
Gradačac Total	41	0	0	3	0	0	20	7	11
OSI Women	13	0	0	0	0	0	6	1	6
Kalesija RVI Total	32	0	0	1	0	0	19	0	12

	Women	1	0	0	0	0	0	1	0	0
Kalesija	Total	31	0	0	4	1	0	11	3	12
OSI	Women	14	0	0	2	1	0	2	1	8
Kladanj	Total	23	0	0	1	0	0	10	1	11
RVI	Women	1	0	0	0	0	0	0	0	1
Kladanj	Total	11	0	0	4	0	0	6	1	0
OSI	Women	5	0	0	4	0	0	1	0	0
Lukavac	Total	39	0	0	8	0	0	12	0	19
RVI	Women	0	0	0	0	0	0	0	0	0
Lukavac	Total	75	3	0	16	0	0	32	1	23
OSI	Women	34	3	0	9	0	0	14	0	8
Sapna	Total	30	0	0	0	0	0	9	0	21
RVI	Women	1	0	0	0	0	0	0	0	1
Sapna	Total	9	0	0	2	0	0	2	0	5
OSI	Women	3	0	0	1	0	0	2	0	0
Srebrenik	Total	41	1	0	1	0	0	10	3	26
RVI	Women	2	1	0	0	0	0	0	1	0
Srebrenik	Total	67	1	0	11	0	0	32	10	13
OSI	Women	27	1	0	5	0	0	12	2	7
Teočak	Total	23	0	0	1	0	0	3	1	18
RVI	Women	0	0	0	0	0	0	0	0	0
Teočak	Total	14	0	0	1	0	0	4	1	8
OSI	Women	1	0	0	0	0	0	0	0	1
Tuzla	Total	143	2	0	15	0	0	64	4	58
RVI	Women	4	0	0	1	0	0	1	0	2
Tuzla	Total	266	8	0	51	0	4	161	6	36
OSI	Women	102	4	0	21	0	0	60	3	14
Živinice	Total	67	0	1	5	0	0	25	2	34
RVI	Women	2	0	0	0	0	0	1	0	1
Živinice	Total	43	0	1	6	0	0	24	7	5
OSI	Women	14	0	0	3	0	0	8	1	2
Total	Total	636	3	2	42	0	1	234	34	320
number	Women	13	1	0	1	0	0	4	1	6
RVI										
Total	Total	750	13	4	116	1	5	376	60	175
number	Women	286	9	2	57	1	0	142	13	62
OSI										
Total	Total	1386	16	6	158	1	6	610	94	495
number	Women	299	10	2	58	1	0	146	14	68

Legend: VSS-university degree; VŠS-college degree; SSS-high-school degree; NSS-lower educational degree; VKV-highly qualified; KV-qualified; PKV-partly qualified; NKV-non-qualified
RVI-disabled war veteran; OSI- other persons with disabilities

With an insight into Table 1 and data obtained from the Employment Service of Tuzla Canton, in November 2019, 1386 persons with disabilities were registered as unemployed, of which 299 were women. 636 unemployed persons have the status of disabled war veterans, while the number of unemployed persons of other disability statuses (peacetime disabled military persons, disabled persons and civilian victims of war, categorized youth, disabled workers and others) is 750, of which 376 persons are qualified, regarding the educational level. The other most numerous persons who are unemployed are non-qualified (175), then persons with high-school degree (116), followed by persons who are partly qualified (60), persons with a university degree (13), persons with a college degree (4), and, at the end, we have persons with lower educational degree (1). Out of the total number, 286 are women. Regarding the educational level there are 142 qualified women, 62 non-qualified women, 57 women with a high-school degree, 13 partly qualified women, 9 women with a university degree, two women with a college degree, and only one woman with lower educational degree. The total number of unemployed disabled war veterans is 636. Regarding the educational level, 320 disabled war veterans are non-qualified, 234 disabled war veterans are qualified, 42 disabled war veterans have a high-school degree, 34 disabled war veterans are partly qualified, three disabled war veterans have a university degree, two disabled war veterans have a college degree and one disabled war veteran is highly qualified. The total number of disabled female war veterans is 13. Regarding the educational level, six of them are non-qualified, four of them are qualified, while one disabled female war veteran has a university degree, one disabled female war veteran has a high-school degree and one disabled female war veteran is partly qualified. The municipality of Tuzla is at the top when it comes to the unemployment of person with disabilities, with a total of 409 unemployed persons with disabilities - 143 disabled war veterans and 266 other persons with disabilities. The municipality of Tuzla is followed by the municipality of Gračanica, with a total of 140 unemployed persons with disabilities - 51 disabled war veterans and 89 other persons with disabilities. The above mentioned municipalities are followed by the municipality of Gradačac, with a total of 135 unemployed persons with disabilities - 94 disabled war veterans and 41 other persons with disabilities. The municipality of Kladanj is the municipality with the least number of unemployed persons with disabilities, 34 in total - 23 disabled war veterans and 11 other persons with disabilities.

Table 2 provides an overview of unemployed persons by type of disability/impairment and disability status in the Tuzla Canton in 2019.

Table 2. Overview of unemployed persons by type of disability/impairment and disability status in the Tuzla Canton in 2019.

Type of disability/impairment	Total	Women	Disability status					
			RVI	Peacetime disabled military persons	Disabled workers	Categorized youth	Disabled persons and civilian victims of war	Other disabled persons
Speech and voice	62	29	1	0	0	46	0	15
Com. physical disability/imp	206	38	134	0	13	21	7	31
Mental and physical disability/imp	38	10	4	0	1	14	0	19
Mental disability/imp	136	42	7	3	5	95	0	26
Other disabilities/imp	252	45	99	3	26	21	7	96
Other physical disability/imp.	597	97	380	3	32	22	38	122
Hearing	47	24	1	0	0	33	0	13
Eyesight	48	14	10	0	1	14	5	18
TOTAL:	1386	299	636	9	78	266	57	340

Legend: RVI-disabled war veterans; Com. physical disability/imp.-Combined physical disability/impairment

Table 2 shows that most unemployed persons are disabled persons with other physical disabilities/impairments (597), of which 97 are women. Regarding the disability status, there are 380 unemployed disabled war veterans, followed by other disabled persons (122), disabled persons and civilian victims of war (38), categorized youth (22), and three peacetime disabled military persons. Regarding the combined physical disability/impairment, there is a total of 206 registered unemployed persons, of which 38 were women. According to the disability status, the most numerous are disabled war veterans (134), followed by other disabled persons (31), categorized youth (21), disabled workers (13), and the disabled persons and civilian victims of war (7). We have 136 registered unemployed persons with a mental disability/impairment in the Tuzla Canton area, of which 42 are women. Most of them are categorized youth (95), other disabled persons (26), disabled war veterans (7), disabled workers (5), while three persons are peacetime disabled military persons. The next largest group is the group of unemployed persons with speech and voice disabilities/ impairments (62). Out of the total number, there are 29 women, and the most numerous persons by disability status are categorized youth (46), other persons with disabilities and disabled war veterans.

Then we have persons with visual/eyesight impairments, 48 of them are on the employment register and 14 of them are women - the most numerous by disability status are other disabled persons (18), followed by categorized youth (14), disabled war veterans (10), disabled persons and civilian victims of war (5), and one disabled worker. In the penultimate place there are persons with hearing disabilities /impairments, a total of 47 of them, of which 24 are women - the categorized youth is the most numerous by disability status and consists of 33 persons, followed by other disabled persons (13) and one disabled war veteran. Persons with mental and physical disabilities/impairments are the least numerous in the employment records (38), there are 10 women - the most numerous persons by disability status are other disabled persons (19), categorized youth (14), four disabled war veterans and one person is a disabled worker. Table 3 provides an overview of unemployed persons with disabilities in the Tuzla Canton in 2000, 2003, 2005 and 2019.

Table 3. Overview of unemployed persons with disabilities in the Tuzla Canton in 2000, 2003, 2005 and 2019.

Educational level	2000	2003	2005	2019
NKV	803	959	972	495
PKV	196	211	223	94
KV	803	952	952	610
VKV	10	33	36	6
NSS	0	0	0	1
SSS	184	190	201	158
VŠS	5	7	6	6
VSS	6	9	8	16
Total:	2.007	2.361	2.398	1.386

Legend: VSS-university degree; VŠS-college degree; SSS-high-school degree; NSS-lower educational degree; VKV-highly qualified; KV-qualified; PKV-partly qualified; NKV-non-qualified

The number of persons with disabilities in the Tuzla Canton who were registered in the protocol of the Employment Service for the year 2000 was 2361, for the year 2003 it was 2361, and for the year 2005 it was 2398. Comparing these results with those of 2019, it can be concluded that there was a significant reduction in the number of persons with disabilities on the protocol of the Employment Service of the Tuzla Canton. The analysis of the results in Table 3 shows that in 2005, the majority of unemployed persons with disabilities were mostly non-qualified (972), followed by persons who were qualified (952), partly qualified persons (233), persons with an university degree (8) and persons with a college degree (6). In 2019, the most unemployed persons with disabilities were qualified workers. In the area of Tuzla Canton in 2000, a total of 24 persons with disabilities were employed through the Employment Service of Tuzla Canton, 21 of them were disabled war veterans. By 2005, that number had increased to 149, of which 88 were disabled war veterans.

According to the data obtained for research purposes and data obtained from the Employment Service of Tuzla Canton, from December 2014 to December 2019, 391 persons were dismissed from the protocol of the Employment Service for the past 5 years, out of which 194 persons belong to the category of disabled war veterans. From these data we can see that the employment of persons with disabilities through the Employment Service of Tuzla Canton has a slight growing tendency.

Such results could have been influenced by co-financing programs, as the Employment Service of Tuzla Canton, in cooperation with the Federal Bureau for Employment, annually implements co-financing programs for employment and self-employment in which it increases the estimated amount for co-financing employment for employment of persons with disabilities by 10%. In this regard, the experience of the Department for the implementation of the aforementioned programs of the Employment Service is that there is not much employment of persons with disabilities under this measure. In their view, the reason for this is that the Fund for Vocational Rehabilitation and Employment of Persons with Disabilities of Bosnia and Herzegovina allocates much more funds for this purpose than the Federal Bureau and the largest number of persons with disabilities are employed through their programs. Also, the decline in the number of unemployed persons may have been influenced by the trend of mass departure/immigration of the population to Western countries, including a significant number of persons with disabilities.

Table 4 provides an overview of persons with disabilities by age and level of education for the month November 2019.

Table 4. Overview of persons with disabilities by age and level of education for the month November 2019

Age	Educational level											Total Women
	NK	PK	KV	VKV	NS S	SSS	VŠŠ- 1	VŠŠ- 2	VSS -1	VSS- 2	VSS- 3	
15-18	4	0	6	0	0	0	0	0	0	0	0	10
	2	0	4	0	0	0	0	0	0	0	0	6
19-20	4	0	2	0	0	4	0	0	0	0	0	10
	1	0	0	0	0	0	0	0	0	0	0	1
21-24	9	0	18	0	0	16	0	0	2	0	0	45
	4	0	4	0	0	8	0	0	2	0	0	18
24-27	5	0	6	0	0	12	0	0	1	0	0	24
	1	0	3	0	0	6	0	0	1	0	0	11
28-30	3	0	25	0	1	8	0	0	4	0	0	41
	2	0	9	0	1	7	0	0	3	0	0	22
31-35	13	1	53	0	0	14	0	0	1	1	0	83
	5	0	23	0	0	4	0	0	0	1	0	33
36-40	15	5	60	0	0	9	0	0	2	0	0	91
	6	1	27	0	0	3	0	0	1	0	0	38
41-45	64	8	55	0	0	13	0	0	1	0	0	141
	9	2	15	0	0	7	0	0	1	0	0	34
46-50	100	23	123	1	0	20	1	0	0	0	0	268
	10	5	23	0	0	4	1	0	0	0	0	43
51-55	125	20	142	2	0	35	0	0	2	0	0	326
	16	3	22	0	0	9	0	0	0	0	0	50
55-60	104	23	104	0	0	24	2	0	1	0	0	258
	6	1	15	0	0	9	1	0	0	0	0	32
61-65	50	11	19	3	0	3	3	0	0	0	0	89
	7	2	1	0	0	1	0	0	0	0	0	11
Over 65	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
Total	496	91	613	6	1	158	6	0	14	1	0	1386
	69	14	146	0	1	58	2	0	8	1	0	299

Legend: VSS-university degree; VSS-1-university degree first cycle; VSS-2-university degree second cycle; VSS-3-university degree third cycle; VŠŠ-1-college degree first cycle; VŠŠ-2-college degree second cycle; SSS-high-school degree; NSS-lower educational degree; VKV-highly qualified; KV-qualified; PKV-partly qualified; NKV-non-qualified

Table 4 shows that by age structure the most numerous are persons aged 51-55 (326 persons), of which 50 women. 268 persons are aged 46-50, of which 43 women, 258 persons are aged 55-60, of which 32 women, and 130 persons are aged 30 or below, of which 58 women. The most persons on the employment protocol of the Employment Service are qualified (613), of which 146 women, and most of these persons are aged 51-55 (142), of which 22 women.

This is followed by a total of 496 non-qualified persons, of which 69 women and most of them are aged 51-55 (125), of which 16 women. Then we have persons with high-school degree (158), of which 58 women and most of them are aged 51-55, while only one woman with lower educational degree is aged 28-30.

In relation to the age structure of unemployed persons with disabilities, in Tuzla Canton, the most numerous persons are aged 31-40 (937), followed by persons aged 41-50 (743), persons aged 51-60 (252), and at the end, persons aged 30 or below (223), which are most often given employment opportunities (Majstorović, 2006).

It can be noticed from the data presented that, from 2000 to 2019, there has been a decrease in the number of unemployed persons from the protocols of Employment Services, and that employment of persons with disabilities is on an increasing level.

CONCLUSION

A large number of people with disabilities after completing their education, as well as after completing vocational training for work in various occupations, are not given employment opportunities, and the majority of them remain unemployed and registered at the Employment Services without being able to exercise one of their basic rights, namely, the right to work and to be employed. The aim of this paper is to present the unemployment status of persons with disabilities in the Tuzla Canton in relation to their disability status, age, gender, educational level, and municipalities over the past nineteen years. The number of persons with disabilities in the Tuzla Canton who were registered in the protocols of the Employment Service for the year 2000 was 2007 persons, for 2003 it was 2361 persons, and for 2005 it was 2398 persons, while in November 2019 a total of 1386 unemployed persons with disabilities were registered. At present, the largest number of unemployed persons is the group of persons with physical disabilities. The results indicate that there has been a significant reduction in the number of persons with disabilities from the protocols of the Employment Service of Tuzla Canton. The decrease in the number of unemployed persons was also influenced by active employment measures, and from December 2014 to December 2019, 391 persons were dismissed from the protocol of the Employment Service due to employment, of which 194 persons belong to the category of disabled war veterans. Also, the decrease in the registered number of unemployed is influenced by the trend of our population departing/immigrating to Western countries. This trend also includes persons with disabilities.

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Language: The articles are bilingual (B&H and English). In case the papers are sent in one of the official languages in Bosnia and Herzegovina, the authors (or the correspondent's author) bear the costs of translation into English.

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