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ORIGINAL PAPER

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# Impact of COVID-19 Pandemic on Perceived Social Support and Mental Health of Persons With Disabilities in Bosnia and Herzegovina

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## ABSTRACT

**Background:** In December of 2019, SARS-CoV-2, a new type of coronavirus, appeared, and it turned into an international epidemic. The consequences of the pandemic, especially the isolation measures, fear of infection and bad economic trends, as a result of the crisis, threaten people's basic psychological needs.

**Objective:** The objective of this research was to assess the impact of the COVID-19 pandemic on mental health and perceived social support of persons with disabilities in Bosnia and Herzegovina. **Methods:** The research included a total sample of 232 respondents with different types of disabilities. The Symptom Checklist (SCL-90) was used to verify the research objective, which assessed three dimensions: somatization, depression and anxiety. Also, in order to verify the research objective, the Multidimensional Scale of Perceived Social Support was applied, which consists of 12 statements that measure the perceived social support of family, friends and other people. The research data was processed with descriptive and inferential statistics. The basic statistical parameters were calculated, while the t-test was used for an independent sample of respondents to verify the set objective.

**Results:** The results of the research showed that persons with disabilities, who were infected with the SARS-Cov-2 virus, had a significantly higher level of somatization, anxiety and depression compared to those who were not infected with the virus. The results in relation to social support did not prove to be statistically significant.

**Conclusion:** The obtained results lead to the conclusion that, in the future, interventions by experts of various profiles must be planned to preserve the mental health of persons with disabilities, which is why it is important to invest in the emotional, psychological, social, physical and spiritual well-being of the individual.

**Keywords:** COVID-19, mental health, social support, persons with disabilities.

## 1. BACKGROUND

In December of 2019, SARS-CoV-2, a new type of coronavirus, appeared, and it turned into an international epidemic. In March of 2020, the World Health Organization declared the COVID-19 pandemic a global and multidimensional problem. The research available thus far warns of the presence of a negative impact of COVID-19 on the mental health of the population (1-3). The consequences of the pandemic, especially isolation measures, fear of infection and bad economic trends, as a result of the crisis, threaten people's basic psychological needs. Since the beginning of the pandemic, people have been exposed to traumatic experiences related to the COVID-19 pandemic on a planetary level, and this may lead to existential fear for life, which is reflected in the violation of the psychological needs of individuals. Although, as Antičević (4) states, the long-term consequences of COVID-19 on mental health cannot yet be known, the experiences thus far, about the

effects of earlier pandemics on mental health, emphasize the possibility of a further increase in mental health problems related to the coronavirus. UNICEF research (5) on the assessment of the impact of COVID-19 on society in Bosnia and Herzegovina indicates that access to health care and treatment for reasons other than COVID-19 was difficult, and in some cases impossible. Persons with disabilities and chronic diseases, as well as families with children under 18 years of age, are the most severely affected. Additionally, the crisis had a significant impact on people's mental health, as 40.3% of respondents reported an increase in stress and fear of infection, which was expressed especially among those who live in cramped living spaces (6). Another household survey on the assessment of the consequences of COVID-19 on society in Bosnia and Herzegovina indicates that the impact of the crisis on people's mental health has additionally increased, and as many as 45.6% of respondents noticed increased stress and fear of infection, and 60.6% of respondents expressed concern that they or their household members would not be able to receive adequate health care in case they were infected (7). The results of the third household survey on the assessment of the consequences of COVID-19 on society in Bosnia and Herzegovina indicate that respondents experienced deteriorated mental health, sleep disorders, fear or anxiety, and in respondents (40.2%), the COVID-19 pandemic caused the same feelings as during the war in the 1990s (5). In addition to the typical population, persons with disabilities were not "spared" by the COVID-19 pandemic. On the contrary, in addition to the type and the degree of disability they have, they are often associated with secondary health conditions as well, such as problems reflected in a lower level of fitness, respiratory problems, and others.

Research has shown that, for example, persons with intellectual disabilities who live in homes (residing and group homes) have four times greater chance of being infected with the corona virus, and they are twice as likely to pass away compared to persons with intellectual disabilities who receive support (receiving care in non-congregate settings) (8). For persons with disabilities, restrictions related to COVID-19 may increase communication, architectural, psychosocial barriers, and create new obstacles through reduced access to professionals (such as special educators and rehabilitators) and increased fear of engaging in activities outside their home environment. In these situations that cause fear in people, social support, which is one of the social resources for dealing with stressful life events, has proven to be extremely useful. Research has shown that social support has positive effects on the level of stress in people with serious health problems (Siegel et.al.9, Widows et.al.10, cited in Ozmet and Pak11). Social support implies the perception of received help, which is important because of a person's feeling that, in crisis or stressful situations, they can count on advice, information, instrumental support or understanding of people. The feeling that we can expect support from others may influence the creation of a positive self-image (12). In the daily life of an

individual, when dealing with various stressors that they encounter, social support is an important protective factor, and its value for every individual is unquestionable (13). During their research of the relationship between social support and stress, Ozmet and Pak (11) primarily state that social support is one of the social resources for dealing with stressful life events. As they state, social support is considered a protective factor against mental and physical health problems (Grills-Taquechel et.al.14, Kaniasty et.al.15, Prati, Pietrantonii16 as cited in Ozmet and Pak11).

## 2. OBJECTIVE

The research objective was to assess the impact of the COVID-19 pandemic on the mental health and perceived social support of persons with disabilities in Bosnia and Herzegovina.

## 3. MATERIAL AND METHODS

The research included a total sample of 232 respondents, of which, 94 respondents (42.2%) were from the area of Herzegovina-Neretva Canton, 50 (21.6%) from the area of Zenica-Doboj Canton, 50 (21.6%) from the area of Sarajevo Canton and 34 (14.7%) from Tuzla Canton. Of the 232 respondents included in the study, 109 (47%) had a confirmed SARS-COV-2 infection, while 123 (53%) did not. In relation to gender, 120 (51.7%) respondents were male, and 112 (48.3%) were female.

To verify the research objective, the Symptom Checklist - SCL-90-R (17) was used, which consists of a list of problems with 90 items, and the task was to assess the extent to which each of the listed problems bothered them (such as headaches, feeling of tension or anxiety, excessive worry). The assessment was conducted using the Likert-type scale (0 – not at all, 4 – very much). The scale consists of 9 dimensions (somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism), and the number of items on each dimension varies from 6 to 13. For the purposes of this study, somatization, depression and anxiety were assessed. Additionally, to verify the research objective, the Multi-dimensional Scale of Perceived Social Support (18) was used, which consists of 12 statements that measure the perceived social support of family, friends and other persons (example of a statement: 'I can talk about my problems with my family'). Each source of social support (family, friends and other persons) is assigned four items, or statements. On a scale from 1 (completely disagree) to 7 (completely agree), it was necessary to mark the degree of agreement with each statement.

The research was carried out in the period from January to May of 2023. The research was conducted in non-governmental organizations and centers that care for persons with different types and degrees of disability. The evaluation of the respondents was individual, as well as, via Google.docs online survey. Our study followed the principles of the Declaration of Helsinki.

### Statistical analysis

The research data was processed using descriptive

and inferential statistics. The basic statistical parameters of the measure of central tendency and the measure of dispersion were calculated, and the obtained research results were presented in a tabular form. To verify the research objective, the t-test was applied for an independent sample of respondents. Research data was processed in the statistical application SPSS 25 for Windows.

#### 4. RESULTS

##### Socio-demographic characteristics of respondents

The results in Table 1 present that the research was conducted on a sample of 232 respondents with different types of disability, with an average age of 44.21±19.31 years. There were 29 (12.5%) respondents with cerebral palsy, 4 (1.7%) with muscular dystrophy, 20 (8.6%) with visual impairment, 45 (19.4%) with hearing impairment, 4 with voice-speech communication disorder (1.7%), plegia in 18 (7.8%), other types of physical disability in 39 (16.8%) and multiple disabilities in 57 (24.6%) respondents. In relation to the level of completed education, 19 (8.2%) respondents did not complete school, while 59 (25.4%) respondents completed primary school, 107 (46.1%) secondary school, 8 (3.4 %) with a college degree, 26 (11.2%) with a university degree and 7 (3%) respondents with a master's/doctorate degree.

Table 2 presents the t-test results in relation to the dimensions of somatization, depression, anxiety, overall support and the variable "Were you infected with Covid 19". Based on the obtained results presented in Table 2, it may be concluded that respondents who were infected with the SARS CoV-2 virus at the statistical significance level of 0.01 have a pronounced higher level of somatization and depression compared to respondents who were not infected. Also, the obtained results show that respondents who were infected with SARS CoV-2 at the statistical significance level of 0.05 have a higher level of anxiety than those who were not infected. The results in relation to social support did not prove to be statistically significant. Although the results in respondents who were infected with SARS CoV-2 show that they had more social support compared to respondents who were not infected, these differences did not prove to be significant.

#### 5. DISCUSSION

The research results presented that persons with disabilities in Bosnia and Herzegovina, who have overcome SARS-CoV-2 infection, have a pronounced higher level of somatization, anxiety and depression compared to persons with disabilities who were not infected with SARS-CoV-2 infection. These results support previous research and are in relation with previous epidemics, which

Variables	N	%	
Gender	Male	121	52.2
	Female	111	47.8
Age	M±SD	44,21±19,31	
Canton	Tuzla	34	14.7
	Sarajevo	50	21.6
	Zenica-Doboj	50	21.6
	Herzegovina-Neretva	98	42.2
Type of disability	Cerebral palsy	29	12.5
	Muscular dystrophy	4	1.7
	Vision impairment	20	8.6
	Hearing impairment	45	19.4
	Voice-speech communication disorder	4	1.7
	Plegia	18	7.8
	Other types of physical disability	39	16.8
	Multiple disabilities	57	24.6
	Other	16	6.9
	Level of completed education	No completed education	19
Primary school		59	25.4
Secondary school		107	46.1
Student		6	2.6
Colledge degree		8	3.4
University degree		26	11.2
	Master's/doctorate degree	7	3.0

Table1. Distribution of respondents according to socio-demographic characteristics

Infected with Covid 19	M	SD	SG	t	p	
Somatization	Yes	30.40	11.06	1.06	5.23	.000
	No	22.88	10.82	0.98		
Depression	Yes	25.28	10.19	0.98	2.87	.004
	No	21.72	8.68	0.78		
Anxiety	Yes	20.59	9.74	0.93	2.58	.010
	No	17.53	8.29	0.75		
Overall support	Yes	69.59	11.64	1.12	0.93	.353
	No	67.86	15.95	1.44		

Table 2. T-test results

state that mental health problems may appear after a pandemic, especially with an increased prevalence in vulnerable populations, among which is the population of persons with disabilities (19). Antičević (4) states that the increased incidence of mental disorders during the pandemic emphasizes the possibility that mental health problems will continue the trend of further growth and be transferred to the post-pandemic period. Other studies relating to the same topic, although on a population of people with typical development, warn of the presence of depressed mood, anxiety and insomnia in 33-42% of patients with the SARS-Cov-2 virus.

The authors concluded that most patients who recover from illnesses caused by coronaviruses, including SARS-CoV-2, should not develop permanent mental illness, but warn of the possibility of depression, anxiety, fatigue, and PTSD, which may persist after recovery from the diseases (Roger20 as cited by Antičević4), and this was confirmed by these research results on the population of persons with disabilities. Also, other studies of the consequences of COVID-19 on mental health of the population affected by the pandemic present the highest

frequency of symptoms of anxiety, depression, and sleep disorders (21, 22). The results of the research "Impact of the COVID-19 Pandemic on the Behavioral Health of Persons with Intellectual and Developmental Disabilities" present that the COVID-19 pandemic had a negative impact on the mental health of persons with disabilities (23), and this also supports our research. According to all mentioned above, it is clear that, in the future, interventions by experts of different profiles must be planned to preserve the mental health of persons with disabilities. To preserve mental health, it is extremely important to invest in emotional, psychological, social, physical and spiritual well-being (24). Observing humans as a biopsychosocial and spiritual beings, a transdisciplinary approach is necessary, and, in the future, it is necessary to work on developing strategies as defense mechanisms that may help in dealing with stress in the population of persons with disabilities. This implies teamwork, which is reflected in the introduction of psychological counseling and education for the preservation of mental health, and the exchange of experiences of persons with disabilities and illness in the sense of how the pandemic affected them, all with the objective to identify stress factors and find solutions.

## 6. CONCLUSION

The research results presented that the pandemic affected the mental health of persons with disabilities who recovered from SARS-CoV-2 infection. Persons with disabilities, who have recovered from SARS-CoV-2 infection, have a higher level of anxiety, depression and somatization compared to persons with disabilities who were not infected. Based on these results, it is necessary to work on programmes or the application of various complementary and supportive therapies that are based on the preservation of mental health in persons with disabilities in the future.

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