Research Article

Analysis of Anxiety *vs.* Empathy Readiness among High School Students during the COVID-19 Pandemic in Montenegro

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ABSTRACT

Introduction: The basic aim in this research paper is to examine core psychological constructs such as anxiety and empathy, among adolescents, all in correlation with the influence of the global pandemic COVID-19. The focus is also in examining differences in anxiety and empathy in correlation with socio demographic variables and personal experiences with COVID-19.

Material and Methods: The research is systematically nonexperimental and was conducted with the help of specially structured survey questionnaire. 252 respondents participated in the research process.

Results: This survey found a fairly high level of anxiety, where the median value was 2.75, an increase from previous research that used the same scale, where the arithmetic average value was 2.02. Empathy has risen slightly compared to previous EMI surveys with the same questionnaire, so the median value is 3.94, which is generally a very high level of empathy. Comparative analysis has shown that there are remarkable distinctions in both variables compared to the sex of respondents, where women are significantly more anxious and empathic. Significant differences in anxiety manifest themselves in relation to economic status, where the less wealthy are significantly more anxious. Striking but not significant differences in anxiety exist in the context of marital status of the respondents' parents and experience with COVID-19, where the most anxious are the children of divorced parents and those who did not have COVID-19, but experienced it in the family environment, through infections of their loved ones.

Conclusion: The basic conclusion of the research may be that the global pandemic has changed the collective psychological profile. The pandemic has affected the perceptible increase in anxiety and a slight increase in empathy. Comparative analysis has shown that vulnerable categories are more susceptible to change, and therefore adolescents are adequate target group for practical work in the field in order to strengthen mental health.

Keywords: Anxiety; Empathy; COVID-19 Pandemic; Psychological identity

INTRODUCTION

Pandemics, like many other disasters on a wider scale, generate significant changes in the entire psychological identity of mankind, caused by sudden and complete transformations of previous priorities. Established primary focuses in regular conditions become peripheral comparing to the epidemic itself and comparing to the imperative of protecting the population from the consequences of the virus. Such emerging circumstances are becoming more complex by the fact that people, primarily from a psychological point of view, were not prepared for this kind and scope of health challenge, which is why they were forced to immediate actions. People had to design further steps in the fight against a dangerous health enemy. Furthermore, it is evident that the duration and uncertainty of the pandemic have made the newly emerging situation significantly more difficult and burdensome. Emotional and psychological capacities have continuously been exhausted, which inevitably results in negative consequences manifested mostly within different segments of social life [1].

Young people, as a particularly vulnerable social category, are significantly affected, as the intensity and patterns of their lives experience radical changes, especially through dealing with the challenges of newly introduced modalities of the atypical process of education and because of significantly reduced social contacts. Different ways of using leisure time are drastically limited, and desires and needs are significantly deprived. The family, as one essential microsystem, also suffers significantly from the negative effects of the pandemic, which in many cases are manifested through uncertainty and endangered existence accompanied by persistent fear of possible illness and fatal consequences for the health and life of elder family members. In such circumstances, increased psychological activity with unwanted connotations is expected. The collective hysteria caused by the pandemic inevitably results in an intensifying sense of fear and uncertainty in humans. On the other hand, it is noticeable that people in such circumstances of dealing with mutual problems have become more compassionate and much more focused on each other. Appreciating the complexity of the whole situation and the dramatic change in lifestyle and ways of communication among people, it seems that the need for adequate treatment and. Analysis of psychological phenomena such as anxiety and empathy during the COVID-19 pandemic is of the utmost importance, which is why this problem is the focus of this research. The basic idea that lays the groundwork for this research suggests that the period of pandemic significantly affects fluctuations in levels of anxiety and empathy primarily among vulnerable groups, where a number of factors, such as age, socio status variables, and exposure to the epidemic itself, play a significant role. The expected increased anxiety may be the result of long term general uncertainty, limited freedom of movement, as well as continued fear for their own and the life of loved ones. On the other hand, the expected increased empathy results from the fact that the entire population is united in the fight against the same problem, and the rise in the number of unwanted epilogues directly implies increased concern for the people around us.

From a scientific point of view, it's quite challenging to examine important psychological constructs in the context of the epidemic and to see if there is room for conclusion that the epidemic has produced a greater empathy among young people, but also whether they are becoming more anxious. Young people in adolescent age are a very useful and specific sample and it is particularly motivating to explore in cooperation with them, because adolescence itself is very specific and interesting, but also complex research field, which must be the primary focus in the period of dramatic changes caused by a pandemic.

MATERIALS AND METHODS

COVID-19 epidemic as a psychological challenge

It is obvious that the newly emerged situation caused by pandemic widespread resulted in dramatic changes in all spheres of life, imposing the need for adapting to a different way of life. In order to suppress the pandemic, pursuant to appeals and professional inputs of relevant health organizations around the world, various mandatory preventive measures have been introduced: Primarily wearing a protective mask, keeping physical distance and regular maintenance of hand hygiene. Despite all the preventive measures in the world, the great number of negative effects of the pandemic are recorded, characterized by the increase in transmission and the number of infected, the percentage of deaths, the dramatic deterioration of the economy. It has made the huge impact on mental health and the psychological aspect of shaping personality, as well. Hence the cognition, but also the need to unite the whole population in order to defeat the virus and to mitigate the consequences of its multi month expansion. It can be stated with certainty that this pandemic will remain carved into the history of civilization and that the entire community will need years to recover from its consequences.

The dynamics of the virus's spread from the beginning of 2020 was quite aggressive and dramatic as well as changes in people's lifestyles, the shaping the collective psychological profiles and our attitudes towards the epidemic itself. During the initial months, official information has changed dramatically as well as future predictions alongside with the combat policies against the virus itself. What seems to be a feature of the current, but also any other crisis or global catastrophe, is that they spread concerns, anxieties and fears on the one hand, but also mutual harmony, co-operation and sympathy on the other hand. Uncertainty, as one of the most important factors in the overall psychological functioning within the framework of pandemics directly affects two feelings. The first feeling concerns psychological security within limited contacts not only in society, but also within our families, taking into account consideration that the whole environment is a very unreliable and disoriented space. Rarely can we control the events and even less forecast or anticipate what might happen in the immediate future. We can say with certainty that most things were not fully known and that a significant number of valid information was nothing more than a bunch of speculation, regardless of whether we are talking about the onset, transmission of the virus or other important segments such as vaccination. The second feeling is directly related to the desire and ability to establish control over our own habits, over resources, over what is universally most important, our own health and health of the nearest ones. Dealing with losing the power of managing our own habits, desires and needs, feeling unrest for human losses have led to an increase in understanding of the feelings of other people and developing mutual empathy and care [2].

The essential idea of the research part of this work is the fact that any epidemic of global proportions has the potential to proportionately influence the rise of anxiety and uncertainty on the one hand and the growing sense of empathy and compassion on the other hand. The focus is that only a joint force can overcome a significantly stronger enemy. Specific, unknown and unpredictable epidemic such as COVID-19 amplifies and emphasizes these emotions. Specifically, when it comes to the COVID-19 epidemic, which has been from the beginning unknown, variable and under examined, it has been dealing with one of the main problems and that is recognition of a credible source that would refer to relevant information and codes of conduct.

Hence, it confused people on the one hand, brought fear into individuals and communities, created confusion and agony, and on the other hand created a sense of losing power over itself and losing control over the whole situation. An ideal example for such a statement is the public controversy about the issue of vaccination, where different, opposite, but extremely convincing narratives tended to confuse, intimidate and waver citizens. This all slowed the process of collective immunization, as one of the rare ways an epidemic can be conquered. On the other hand, the declaration of the state of the pandemic has alarmed all relevant world addresses to begin the lockdown restrictions of institutions and borders in the largest number of countries in the world. The lockdown underlined that contacts between people should be reduced to the lowest possible measure, which has caused the change in people's habits both on a professional and on a personal level. Adapting to a new way of life, by changing the established patterns of behavior of citizens, the COVID-19 pandemic is transformed into a serious collective psychological challenge.

In psychological terms, the importance of this challenge gains higher importance as it is conditioned by long term duration, which resulted into long term social isolation, but also stigmatization of people who have faced the epidemic directly. The stigmatization was extremely strong at the beginning of the epidemic, when a lot of condemnation was directed to initial cases, especially in smaller communities. It is also important to note that the existence of the population is threatened by the closure of many workplaces, especially in the area of catering and transport. Schools were closed, having been places where a large number of people gather, and even the educational cycle has its own disruptive and changed course. School closures, home isolation, fear of illness have significantly affected the mental health of pupils, teachers and their families. Stress can have a very negative effect on the student population particularly on vulnerable categories of lower education (preschool education and primary school) and categories of pupils who move from one level of education to another, higher (primary/secondary school or high school/college).

It is clear that the COVID-19 pandemic is a health, psychological, educational and a social crisis, but what stands out as a characteristic of this turbulent period is that a man is in charge of all processes, from the transmission phase of the virus to its suppression. That means that 'the burden of preserving or perhaps destroying the collective good' is on the shoulders of the common man. Consequently, general confusion with preventive measures and information offered tend to reinforce concerns and fears, which end up with difficulty adjusting to the demands of the situation and self protection. The research was aimed at understanding how people feel at this time, what prevents their successful adaptation and how long it takes for people to adjust to the whole situation. Also, it is extremely important to investigate why individuals behave in a certain way, why they are selective in respecting the measures or why they protest in respect of them. Addressing this topic during the pandemic period and monitoring changes of behavior of individuals and collectives continuously is crucial, because the results speak of us as a society, but also help to create preparatory statistics that would serve as the basis for some potential future challenges similar to the COVID-19 pandemic.

Based on everything said in the text so far, it is clear that the pandemic is a complex psychological phenomenon, carrying great challenges, often leaving serious consequences, which will be felt for a long time after the epidemic is contained. It's very possible that the psychological consequences will have even the longest duration compared to all other types of consequences, especially in an environment where many individuals suffered human losses in their families, caused by the COVID- 19 virus.

A large number mostly online researches was conducted with the aim of measuring the intensity of problems in the psychological functioning of people during the pandemic. The largest number of studies produced a common conclusion that massive scale, vagueness and low predictability of the virus were significant threats to the mental health of citizens. Cognitive assessments of respondents that are largely inaccurate, different emotional disorders, frequency and different forms of psychopathological symptoms are just some of the common forms of psychological problems. Unrivalled, the most common psychological problems are anxiety and depression. Therefore, by observing and analyzing the available data, it was found that the most common psychological problems that have occurred in the past year and a half, caused by pandemics are depressive and anxious states. In extreme situations, with serious health consequences, the need for mechanical ventilators, losses within the family, conditions for the development of post traumatic stress disorder are normally expected. In such cases, certain groups of people proved to be more vulnerable than others. Among the most vulnerable groups are older people, where. Excessive stress is often diagnosed, anxiety, irritability, depression, sleep disorders, fears, tension and anxiety.

What made the oldest population vulnerable and psychologically sensitive is related to recommended preventive measures that have often been the most rigorous and restrictive towards this population, since they are recognized as the riskiest epidemiological group, and the availability of medical resources often questionable. This notion is especially related to the very beginning of the epidemic when infrastructure and health resources to prevent the spread of the pandemic were not on a satisfactory level. It is typical in these patterns that pathological patterns of finding new victims emerge (statistically proved increased number of domestic violence) the need for stigmatization, but also that additional disbalance between business and private life by undermining the boundaries between private and official space. It is clear that disbalance occurs in the field of neglecting private life and excessive dedication to the job. Fear of infection at a very frequent time produces the appearance of psychosomatic symptoms, including body pain, feeling discomfort, lack of vitality and energy, shortness of breath and panic. This may cause excessive use of medicines that have a calming and protective effect. Each of the above mentioned problems in a more serious measures impair mental health, which ultimately has a negative consequence in productivity, unfulfilled goals, but also reduced resilience in contact with stressful events. This epilogue opens up a new cycle

of problems, where there is room again for anxiety, depression and post-traumatic stress syndrome.

The situation is additionally complicated by a specific and unique fear that is present in these and similar viral infections. Namely, the cause of infection is not noticeable to the naked eye, and there is a constant doubt that it might be anywhere around us. Panic has also existed during time when the virus was still not present in our environment but it caused patterns of behavior as if it was largely present. The psychopathological effect of the COVID-19 pandemic is also growing by the fact that the first symptoms of infection were not specific and easily recognizable, leaving more and more room for unfounded fears. The state on the field is actually the opposite, because the virus has general early signs of infections common to regular colds, which breed confusion, insecurity, fears that again generate specific difficult decision making and behavior accordingly. Similarly, it happens that a large number of transient colds cause psychological. Symptoms as if COVID-19 is present, and it may happen those individuals prone to colds are in continued fear of COVID-19 infection [3].

The nature of the virus and its complete inexplicability in the sense that there are a significant number of asymptomatic cases further complicate the situation. It is in psychological sense one of the factors that carries the greatest danger. The knowledge that infected people move around us daily, many of them unaware that they are infected and have the status of 'silent killers', causes panic, additionally reinforces fears and enhances desire for social isolation. Long term confrontation with such a complex situation makes anxiety become significantly more noticeable, visible and recognizable than in the period before COVID-19 epidemic. Everything specified in the preceding part of the text indicates that specific emotional and behavioral responses appear both at the individual level and at the level of the whole community. It's also indicative that there is a behavior to look for the culprit in the whole story. That is what pulls various accusations, often unjustified attacks, stigmatization of those who are infected, and especially those who appeared to be the first cases in smaller communities. This stigmatization can especially be directed at those foreign nationals coming from environments where the virus is much more dynamic and widespread.

Anxiety and anxiety sensitivity

For the whole topic of this work, it is especially important to talk about the concept of anxiety sensitivity, because it is a factor that is very much activated in crisis situations, to which a global pandemic also belongs. Anxiety sensitivity has been shown to be a cognitive risk factor of various anxiety disorders, where panic disorders and panic attacks are at the forefront. One of the prominent authors in this field, Steven Reiss and associates, 1986 stressed that it is more important to know what a person thinks will happen as a consequence anxiety, rather than how common episodes of anxiety are. The notion of anxiety sensitivity is very important when it comes to general anxiety in the period of global pandemic, appreciating that all people do not respond equally to the whole situation and they do not experience fear in the same way. There are those who have a greater predisposition to react anxiously, and it is anxiety sensitivity one of the most important predictors of such a reaction.

When the previously stated assumption is transferred to the real epidemic circumstances, it becomes clear how anxious sensitivity is an important factor in the development of anxiety and severe fight with the whole situation. Individuals who are anxiously sensitive will interpret a great deal of situations in practice as extremely threatening, which will ultimately cause increased anxiety. Examples of such pandemic situations are primarily related to the news that a person close to or contact person got infected or reported symptoms of infection. Whereas some people are going to get that kind of news relatively calmly and will not panic until they develop symptoms themselves, others will become extremely anxious, which is likely to cause some of the symptoms that are common to the COVID-19 epidemic, such as general weakness, lack of appetite, head pain, etc. It is clear that anxiety is one of the most common adverse psychological outcomes in dealing with the consequences of the COVID-19 pandemic, and that anxiety sensitivity is a central phenomenon of this anxious response to the aforementioned epidemic. A recommendation that can be made in a psychological sense is to illuminate in practice the very concept of anxiety sensitivity, all in order to reduce the rate of maladaptive psychological response to the pandemic, thus gaining its strength and overall devastation.

Empathy during pandemics

One of the psychological phenomena that occupies the attention of theorists and researchers the most is empathy. It's not too hard to explain why it is like that, since empathy is the cornerstone of pro social patterns of behavior in the modern world. It is especially important to address this topic in the context of a global pandemic, because people seem to be more connected in one task than ever, and that is the collective fight against the COVID-19 virus. The assumption is that empathy is a personality trait that has increased greatly during this period, primarily because there are a large number of situations in which individuals experience suffering which causes an emotional reaction of the environment. The definition that empathy is actually a pro social form is extremely important for understanding phenomena within the framework of a global pandemic because the way out of the whole problem is based hugely in people's ability to empathize with those who are in trouble. Mutual tolerance, understanding and respect for others are the core of the joint fight against the COVID-19 virus. These components are clearly visible in compliance with recommended measures, in personal responsibility, but also in the specific responsibility that each of us can take, such as helping the vulnerable, helping those who suffered human victims during the period of pandemics. The facts suggest that the pandemic produced strong emotions, so one of the epilogues is the increase in people's focus on each other. In theory, it is very important to create a distinction between the cognitive and affective dimensions of empathy. The cognitive dimension represents the awareness and cognition of another person's inner states. On the example of the COVID-19 pandemic, the cognitive dimension would be awareness that other people are

afraid, that they are insecure and concerned about the health of their loved ones and that they are preoccupied with how to save their jobs. On the other hand, the affective dimension of empathy is the emotional reaction in relation to cognitive cognition. The point is that in the process of empathy, the emotional reaction is similar to the original emotion recognized in the interlocutor. It's not about mirrored emotions, since both the personal judgement and the impression on the whole situation are retained. In the context of a pandemic, the affective dimension of empathy is, for example, a sense of concern for the health of those at risk, and the existence of those who have suffered losses.

It is extremely important to know that empathy is a sparkle for some more serious steps in practice, because if we understand the position of the person with whom we interact, we will be motivated to help. In the period of pandemics, the greatest benefit the society can have is the increase of collective empathy. Both the cognitive and affective component of empathy makes people ready to be made available to the community, in the realm of their abilities, and to help with special care to all those people who need help. It seems that the challenges brought by the modern age have caused empathy to be increasingly discussed about and perceived as one of the paths society faces with the dark sides of globalization and trends that seem to swallow a man. An important role in the whole process has been taken by increased interest in the concept of emotional intelligence. The whole story with the COVID-19 pandemic is primarily one big challenge of empathy for the whole society, which has passed different stages. Chronologically observed, empathy was a pillar of motivation to withstand restrictive measures of virus suppression, but also an integral part of all those actions that contributed to the procurement of medical equipment, donation of respirators, etc. A particular form of empathy during the period of pandemics is the efforts in the field of material giving and. Favors, where with particular sensitivity was taken care of people who were economically affected by the pandemic and who are expecting an extremely long and arduous recovery. At the very end of this chapter, it can be said that one of the rare positive things produced by the pandemic is that people are more focused to each other, that we listen more closely to the collective pulse and that as a society, we are expected to have a common, long, continuous and consistent struggle with the consequences of the post COVID-19 period.

RESULT AND DISCUSSION

Methodology and measuring instruments

The entire research is systematic, non experimental, with data collected using a purpose made questionnaire. This chapter will describe the variables that make up the research process in detail, the sample of respondents described, and the measuring instrument, while specifying procedures in the field of statistical data processing.

Sample description in research

Speaking of a sample of respondents, it should be said that the survey was conducted with the help of 252 high school students who attend the Stojan Cerovic high school in Niksic. The sample has characteristics of a deliberate and appropriate sample. The sample can be said to be intentional because high school students are targeted and it has elements apposite because those who expressed the most motivation for the research process were questioned. Below, table 1 displays the distribution of the sample relative to independent variables (Table 1).

Table 1: Sample distribution relative to independent research variables.

Variables		Frequencies	Percentages (%)
Gender	Male	85	33.73
	Female	167	66.27
Age	15	47	18.65
	16	97	38.49
	17	61	24.21
	18	40	15.87
	19	7	2.78
Marital status of parents	Married	216	85.71
	Divorced	17	6.74
	Married but live separately	2	0.8
	Widowed	17	6.74

Socio-economic status	Below average	1	0.4
	Around the average	203	80.55
	Above average	48	19.05
Experience with COVID-19	Personal No	103	40.88
	Yes	72	28.57
	Personally no but a family member yes	77	30.55

The sample of respondents related to gender is heterogeneous, with a noticeably higher representation of women who make up 66.27% of the population surveyed. As for age of the respondents, 15 year's old are 18.65% of the sample, 16 year's old 38.49%, 17 year's old 24.21%, 15.87%, and 19 year's old 2.78% of the sample. When it comes to the marital status of the parents of the respondents, in 85.71% of cases it is marriage, while 6.74% belong to divorcees, as is the share of parents who have widower status. 0.8% of the sample has parents who are married but live apart. Distribution within the variable of socio economic status is very interesting and shows that 80.55% of those living within the average, and 19.05% above average wealthy. Only 1 respondent pointed out that he/she belonged to a sub average wealthy. Finally, when it comes to the immediate experience with the COVID-19 pandemic, 40.88% of them did not have an infection, 28.57% of them did, while in 30.55% of cases the infection was missed on a personal level but affected one of the family members.

Measuring instruments

The preceding part of the text indicated that the research data was collected using a purpose made measuring instrument. The aforementioned questionnaire consisted of 3 parts.

- The scale of socio demographic variables, which consists mainly of closed type questions, where respondents declare gender affiliation, age, marital status of parents, school achievement at term, socio economic status of the family and immediate experience with the COVID-19 pandemic.
- Scale AT 29, by Tovilovic, et al., which measures anxiety. The scale itself is five degrees and it consists of 29 items. It is a one dimensional scale whose reliability in the author's initial research, expressed through alpha coefficient, was 0.960 [4].

EMI scale, by Genc, et al., which measures empathy readiness. The scale is five degrees, Liquert type, but unlike the aforementioned, this scale consists of 4 dimensions, which are:

- Empathy with negative emotional states.
- Empathy with positive emotional states.
- Empathy as a social role.
- Emotional reactions provoked by empathy. The reliability of the dimensions of this part of the measuring instrument, during the initial research, conducted by scale creators, ranged between .78 and 88 (Table 2).

Table 2: Descriptive statistics on anxiety scale.

Scale name	Kolmogorov smirnov	P
Anxiety	0.06	0.03
Empathy	0.05	0.2

Anxiety is moderately highly represented, with representation in the height of 2.75. The minimum and maximum amount of the score is 31 and 145, with the median value of the amount being 79.98. It should be noted that the standard deviation is 25.89, with low and positive skewness (0.284) and moderately high and negative kurtosis (-630). This kind of skewness and kurtosis shows that distribution is almost dominantly platykurtic, but also that it is slightly moved to the left, *i.e.*, that there are more respondents who. Express lower anxiety. It should be especially focused on interpreting the median level of the item, which in this case, on a five stage scale, is 2.75. Since anxiety is a trait for which low scores are expected, it can be said that this result implies slightly higher levels (Table 3).

Table 3: Descriptive statistics on scale and subjects of empathy.

Scale name	Min	Max	AS sums	AS entries	Std. dev	Skewness	Kurtosis
Empathy with negative emotional states	16	65	40.75	3.13	11.376	0.03	-0.628
Empathy with positive emotional states	35	70	60.95	4.35	6.77	-1.117	1.3
Empathy as a social role	13	40	32.61	4.07	5.488	-0.791	0.437
Reactions provoked by empathy	15	35	31.42	4.48	3.683	-1.611	3.128
Empathy as a whole	99	210	165.74	3.94	21.616	-0.442	0.157

In analyzing the results on a subscale of empathy with negative emotional states, it should be noted that the minimum and maximum amount of the score is 16 and 65, where the median value of the amount is almost 40.75. This score further implies that the average of the item on this subscale is 3.13, which means that the sample has a highly present empathy with negative emotional states. Skewness is extremely low, 0.03, and as such does not imply either positive or negative asymmetry. The kurtosis is negative, at -0.628, which suggests that the distribution of the score on this subscale is platykurtic. As for the subscale of empathy with positive emotional states, the minimum and maximum amount is 35 and 70, while the median value of the amount is almost 60.95. This further means that the median response value on this subscale is 4.35, which is an extremely high level of empathy with positive emotional states. Skewness is negative and high, at -1,117, so it implies a displacement of distribution to higher levels. Kurtosis is also high, but it is positive and implies leptokurtic distribution of scores. As for the subscale Reaction provoked by empathy, it should be said that the minimum and maximum amount of the score is 15 and 35, that the median value of the amount is almost 31.42 and the average value of the item is 4.48. This is also the highest level of empathy compared to all other subdimensions. High, negative skewness (-1,611) and positive kurtosis (3,128) confirm a pronounced leptokurtic asymmetry that is moved towards higher scores [5-7].

When the results are combined with all four subscales, and a chart from the empathy scale as a whole is made, the most important data is that the average response value is 3.94. Given that the interval in reply is between 1 and 5, it is clear that empathy is very high in the research, which means that strong empathy is present with people at a given time. What is important to do is to make a comparison between the level of empathy in this research and the initial research conducted, using the EMI questionnaire. Generally, the initial research showed lower levels of empathy across all dimensions than this research. The median values on the dimensions of the measuring instrument were: 3.12 (empathy with negative emotional states), 4.22 (empathy with positive emotional states), 3.91 (empathy as a social role) and 4.31 (emotional reactions caused by empathy). The positive differences in our research can almost certainly be a product of the fact that in this case the overall context underlines pandemics, during which man's focus on man has increased, mutual respect and compassion, as well. Descriptive parameters, arithmetic medians clearly show that the female part of the population has significantly higher scores on the aforementioned scale. The median value for men is 2.31, and for women 2.98 and these differences can be interpreted by women's sensitivity determined by gender, which in crisis situations are more concerned and insecure. As for the scale of empathy in the whole, the t test is -6.938, with the median values being category 3.65 (men) and 4.09 (women) it is clear that women as a more sensitive gender are more addressed to other people, that they empathize more intensely. It is clear that female respondents achieve greater scores on the scale of anxiety and empathy. Research shows that the impact of age is not so strong to make the aforementioned correlation on the scale of anxiety and empathy considered at a deeper level. It is desirable to note that there is a mild trend that older respondents are less anxious, but also more empathic, which is interpreted by their maturity and greater self awareness (Table 4) [8].

Table 4: Differences in anxiety *vs.* marital status of respondents.

Marrital status	N	AS	Comparison indicators
Married	213	2.75	Kruskal Wallis Chi=5.277, df=2, p=.071
Divorced	19	3.16	
Widowed	17	2.43	

There are significant differences in anxiety over the marital status of the respondents' parents, although these differences are not strong enough to make them statistically significant. Kruskal Wallace's *chi-square* meter test is 5.277, with a level of significance of 0.071. Medium values show clearly in which direction the aforementioned differences are manifested. Convincingly, the highest level of anxiety is present in the respondents whose parents are divorced. AS for that categories are 3.16. Significantly lower levels are present in children from typical marriages (AS 2.75), while the lowest level of anxiety is present in children whose one parent has passed away (AS 2.43). The

data that the most anxious ones are those from the families where the separation is expected is completely logical and expected, since these children typically have difficult childhoods, do not live in functioning communities and often grow up under different raising styles. All of this may imply an increase in anxiety in teenage years. The following text shows differences in empathy related to the marital status of the parents of the respondents (Table 5) [9].

Table 5: Differences in empathy *vs.* marital status of respondents' parents.

(Sub) scale	Marital status	N	AS	Comparison indicators
Empathy with negative emotional states	Married	213	3.11	F=1.164, df=249, p=0.314
	divorced	19	3.42	
	widowed	17	3.1	
Empathy with positive emotional states	Married	213	4.34	F=1.121, df=249, p=0.328
	divorced	19	4.51	
	widowed	17	4.38	
Empathy as a social role	Married	213	4.04	F=1.442, df=249, p=0.238
	divorced	19	4.22	
	widowed	17	4.28	
Reactions generated by empathy	Married	213	4.47	F=1.061, df=249, p=0.348
	Divorced	19	4.55	
	widowed	17	4.65	
Empathy	Married	213	3.92	F=1.523, df=249, p=0.220
	divorced	19	4.13	
	widowed	17	4.01	

The general impression gained by no statistically significant differences in empathy related to the marital status of the respondents' parents. If you look at the scale of the whole, the F test is 1.523, and the significance level is 0.220. The median values are approximated to each other at 3.92 (married), 4.13 (divorced) and 4.01 (widowed). The results are similar in all subscales, and considering the small differences, deeper analyses are. Necessary when it comes to subscales of empathy with negative emotions, the F test is 1,164, with a level of significance of 0.314, where the highest level of empathy is produced by children of divorced parents (AS 3.42). The other two categories have relatively low levels, in the values AS.3.11 and 3.10. As for the subscale Empathy with positive emotional states, the F test is 1,121, with a level of significance of 0.328. The median values are categories: 4.34 (married), 4.51 (divorced), 4.38 (widowed). On the scale of empathy as a social role, the F test is 1,442,

where the level of significance is 0.238, with the median values in order 4.04, 4.22, 4.28. Analysis of the results shows that the impact that the school's achievement has on anxiety and empathy outweighs the impact that the pandemic has on young people (Table 6).

Differences in anxiety and empathy compared to COVID-19 experience

There are no statistically significant differences in anxiety compared to the COVID-19 experience, but there are certainly differences worth commenting on and deeper analysis. Kruskal Wallis chi square test is 4,646, with a level of significance of 0.098. The median values within the categories are such that the highest level of anxiety is present in those individuals who did not have direct experience with COVID-19, but did have among

family members. The middle value for this category is 2.95 and that is a fairly high level of anxiety if you consider it to be an unwanted personality trait. Significantly lower levels of anxiety were present in those who had no experience with the epidemic (AS 2.69) and those who overcame the virus (AS 2.65). Such data can be explicated through the fact that care for family members and powerlessness in resolving the situation caused a slightly higher level of anxiety among young people who did or did not have the COVID-19 virus. Descriptive parameters show that the highest level of empathy is present in those people who did not have COVID but whose family members had the problem (AS 4.02). The differences between the other two categories are not excessively large, where the middle values are recorded in the range between 3.92 and 3.9 [6]. There are no statistically significant differences in anxiety compared to the COVID-19 experience, but there are certainly differences worth commenting on and deeper analysis. Kruskal Wallis *chi square* test is 4,646, with a level of significance of 0.098. The median values within the categories are such that the highest level of

anxiety is present in those individuals who did not have direct experience with COVID-19, but did have among family members. The middle value for this category is 2.95 and that is a fairly high level of anxiety if you consider it to be an unwanted personality trait. Significantly lower levels of anxiety were present in those who had no experience with the epidemic (AS 2.69) and those who overcame the virus (AS 2.65). Such data can be explicated through the fact that care for family members and powerlessness in resolving the situation caused a slightly higher level of anxiety among young people who did or did not have the COVID-19 virus. Descriptive parameters show that the highest level of empathy is present in those people who did not have COVID but whose family members had the problem (AS 4.02). The differences between the other two categories are not excessively large, where the middle values are recorded in the range between 3.92 and 3.9 [10].

Table 6: Differences in anxiety compared to respondents' experience with COVID-19.

Personal experience with COVID-19	N	AS	Comparison indicators
No	101	2.69	Kruskal wallis chi=4.646, df=3, p=.098
Yes	72	2.65	
Personally no, but member of family yes	76	2.95	

CONCLUSION

In this research, the focus is on two extremely important psychological phenomena, anxiety and empathy, all in the context of the current COVID-19 pandemic. Pandemics, as any other catastrophes of greater proportions, have changed the psychological profile of people in the modern age. One can talk about long term and intense influence, where one of the assumptions is that people have become generally more anxious, but more focused on each other. As for the theoretical chapter, the topics that form the core of the research part of the work have been elaborated. At the very beginning of the theoretical chapter, a set of information was presented intending to refer to the pandemic as a context of important psychological changes in the whole society. There was further elaboration of pandemics as a psychological challenge, a pandemic as a cause of numerous problems within the sphere of mental health. In the later stages of this work, dependent research variables, phenomena of anxiety and empathy were processed, with their numerous implications, in the context of the COVID-19 epidemic.

The main objective of the research relied directly on the aforementioned subject of work, and was to measure the representation of psychological constructs such as anxiety and empathy among high school students in Montenegro. The additional aim of the research was to examine the intensity, direction and statistical significance of differences in anxiety and empathy in relation to a range of socio status variables such as gender, age of respondents, marital status of their parents,

success achieved during the first term of the current school year. It is important to note that differences in dependency are also tested compared to the experience adolescents have with COVID-19, whether it was directly experienced or through family members. The entire research is systematical, non experimental, with data collected using a purpose built questionnaire. Gender, age, school achievement, marital status of parents of respondents, socio economic status and experience with COVID-19 had the status of independent variables in the survey, while dependent variables were, already mentioned, anxiety and empathy. It should be said. That the survey was conducted with the help of 252 high school students, who attend the Stojan Cerovic Gymnasium in Niksic. The sample had characteristics of a deliberate and appropriate sample. The questionnaire that collected the data in the research process consisted of 3 parts. The first part represents the scale of socio demographic variables, composed of closed type questions, where respondents declared about gender affiliation, age, marital status of parents and school success at term, socio economic status of the family and immediate experience with the COVID-19 pandemic. The second part of the questionnaire is the one dimensional scale, Scala AT29, which measured the trait of anxiety. The third part of the questionnaire is the EMI scale, which measured empathy. Scale consists of the following dimensions:

• Empathy with negative emotional states
• Empathy with positive emotional states
• Empathy as a social role

• Emotional reactions provoked by empathy

As for the reliability of the measuring instrument, when it comes to the scale of AT29, its reliability in this survey is 952; the scale of empathy in the whole has a level of 914, while its dimensions are the following reliability: Empathy with negative emotional states. 952, empathy with positive emotional states. 871, empathy as a social role 0.831, emotional reactions provoked by empathy 0.734. Statistical processing of data was performed in the SPSS statistical program version 23. When it comes to the results of the research process, it can be said that they are quite interesting and still they offer enough room for further analysis. As for the descriptive statistics on the anxiety scale, it should be noted that the median response value is 2.75. Since the maximum possible value of this parameter 5, it concludes that measured anxiety level is very high. In comparison to a similar survey on the general population from 2009, the median value increased from 2.02 to 2.75, which is very much the impact of the COVID-19 pandemic. A similar epilogue is present on the scale of empathy, where the following medium values are present in this study: Empathy in the whole of 3.94, empathy with negative emotional states 3.13, empathy with positive emotional states 4.35, empathy as a social role 4.07 and emotions provoked by empathy 4.48. When these recent ones are compared to a 2009 study, there is a slight increase in empathy, which can also be attributed to the impact of a global pandemic. As for gender as indicator of differences in anxiety and empathy, there have been statistically significant differences in both relationships, with a level of significance of 0.00. It turns out that women are far more anxious at the moment, but also a more empathic gender. On the other hand, the age of respondents has been shown not to correlate statistically significantly with the dependent variables of this research. Rather interesting comparative analysis is present in the impact of the marital status of the respondents' parents on the anxiety of respondents, since this independent variable did not cause significant differences in empathy. The impact of the marital status of the parents of the respondents on anxiety was shown to be 5,277, with a level of significance of 0.071, with the most anxious children of divorced respondents with a median value of 3.16, which is a fairly high value on the anxiety scale. School success in this case is not an indicator of differences in dependent variables, and it can be concluded that the strength of the global pandemic environment outweighs the natural impact that school success might have as an indicator. Justified was the prediction that socio economic status significantly determines respondents' anxiety, as the U test was 3726.5, with a level of significance of 022. Those who describe their economic status below average and average are significantly more anxious with a median value of 2.82. Direct experience with the COVID-19 virus did not make any major differences in respondents' empathy. The differences in anxiety are not statistically significant, but they are striking, where it has been shown that the most anxious (AS 2.98) are those who did not personally have COVID-19, but did experience it through the struggle of their family members with the same.

When all the data is summated into a unique conclusion, it can be concluded that the COVID-19 pandemic has influenced an increase in anxiety significantly and had a slight increase in empathy. Particularly endangered in terms of anxiety are those who are closer to vulnerability groups. In other words, those who have a greater predisposition for anxiety sensitivity. We are talking about women, children of divorced parents, below the average wealthy who fear for their existence in this financial crisis, but also those who experienced COVID-19 through family members, who at the same time fear that they themselves could become infected. The categories mentioned in the sample are a suitable group of the population with which it is possible to do psychologically focused workshops or projects, with the primary aim of reducing anxiety and strengthening empathy.

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