The Impact of Anxiety and Depression on the Quality of Life of the university Students: the Slovak experience

F. Petrovic (Frantisek Petrovic)[1], K. Guttesen (Kristian Guttesen)[2], F. Murgas (Frantisek Murgas)[3], R. Kralik (Roman Kralik)[4]

Original Article

[1] Department of Ecology and Environmental Sciences, Constantine the Philosopher University in Nitra, 949 01 Nitra, SK
[2] Faculty of Education and Diversity, School of Education, University of Iceland, 107 Reykjavik, IS
[3] Department of Geography, Technical University of Liberec, 461 17 Liberec, CZ
[4] Department of Social Works, Faculty of Theology, Catholic University in Ruzomberok, 03401 Ružomberok, SK

E-mail address:

fpetrovic@ukf.sk

Reprint address:

Roman Kralik
Department of Social Works, Faculty of Theology
Catholic University in Ruzomberok
03401 Ruzomberok
Slovakia

Source: Clinical Social Work and Health Intervention *Volume: 15* *Issue: 6*
Pages: 54 – 74 *Cited references: 96*

Reviewers:

Arab Naz
University of Malakand Chakdara Khyber Pakhtunkhwa PK
Vitalis Okoth Odero
Amoud University, Borama, Department of Public Health, KE

Keywords:

Health. Mental health. Anxiety. Depression. Quality of life, epistemology of quality of life, suicide

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(6): 54 – 74; DOI: 10.22359/cswhi_15_6_05 © Clinical Social Work and Health Intervention

Abstract:

Aim. This paper explores the relationship between the two closely related phenomena of health and quality of life. Health has a physical and mental form, mental diseases are divided into several groups: a) no mental diseases, b) anxiety and depression and c) suicidal thoughts and suicide attempts. The paper is focused on the mental health of university students, especially on the category of students experiencing anxiety and depression and the impact of these mental diseases on the

quality of life. It is based on a non-medical understanding of health, based on self-reported health by individuals. The numbers of people suffering from depression before the outbreak of the pandemic in Europe and in the world are given. The recently ended COVID-19 pandemic had a robust impact on all segments of society, including the concept of the quality of life. Several unresolved epistemological questions related to the quality of life are presented. Anxiety and depression are illnesses, in the context of the quality of life they are related to ill-being. This knowledge questions the identification of the quality of life with well-being. Three goals are formulated. The first is to explore how perceived anxiety and depression affected students' quality of life during the pandemic. The second goal is to measure the quality of life of students affected by anxiety and depression and compare it with the quality of life of all students participating in the research. The third goal is to discover which of the variables are predictors of anxiety and depression and which are predictors of the quality of life.

Results. The higher the values of suicidal expressions, the lower the values of pre-pandemic relationships, health, quality of life and trust, and vice versa. Because the category 'suicidal behavior' belongs to the 'negative indicators', the variables quality of life, health, relationships before the pandemic and trust are its predictors. Furthermore, in women, 'Suicidal manifestations' are positively correlated with all life variables, which can surprisingly be interpreted as the fact that the growth of suicidal manifestations is accompanied by an increase in confidence with a large correlation, an increase in the quality of life, health and social relationships with a medium correlation. Because the category 'Suicidal manifestations' belongs to the 'negative indicators', variables trust, quality of life, health and social relations are not its predictors. Up to three levels of subheading are permitted. Subheadings should not be numbered.

Method. The present study applies both secondary and primary research. On the one hand, the present researchers base the data on Eurostat, WHO, and large-scale studies, and, on the other hand, the variables are determined by primary data from an online questionnaire in which university students in Slovakia indicate answers on the Cantril scale of 0-10. The questions are listed in the appendix. The key questions are focused on the impact of the pandemic on the psyche and the quality of life.

Conclusion. The research took place in the months of April, May and June 2022. Students of bachelor's, master's and doctoral studies at Slovak universities participated in it, N=389. Attention is focused on students who felt anxiety and depression. Variables that can be assumed to influence the quality of life and mental health of university students are identified.

These variables are anxiety and depression, quality of life and further health (both physical and mental), social relationships, relationships with the loved ones before the pandemic, and trust. The inclusion of health, anxiety and depression and quality of life is related to the focus of this paper. The variables – social relations, relations with the closest ones before the pandemic and trust – express social capital. Together with lifestyle, this is a factor influencing the relationship between physical and mental health. Loneliness as a form of social relationships is a strong predictor of worsening mental health.

1. Introduction

An important part of every person's life satisfaction is their health, which can be considered as the most valuable asset that every person has (Meldrum, Morris, Gambone, 2017). Health care is at the highest level in the most economically developed countries – whether they are OECD member states or countries with a very high level of development according to the Human Development Index (hereinafter referred to as the HDI Index), measured by the United Nations (United Nations Development Programme, 2022). Slovakia is a part of both bodies. The COVID-19 pandemic (hereinafter referred to as the pandemic), which broke out at the beginning of 2020, had robust effects on all countries and their inhabitants, regardless of the level of healthcare. The emergence and spread of the pandemic, but above all the impact on various spheres of life, has been described many times. Researchers and international organizations pointed out the health, social and economic impacts of this viral disease (OECD, 2020, COVID-19 and Africa, 2022, Kondrla et al., 2023, Suzuki, Numao, Komagamine, Haruyama, Kawasaki, Funakoshi, Fujita, Suzuki, Okamura, Shiina, Hirata, 2021, Carmona-González, Flores-Garnica, Sánchez-Ramos, Ortiz-Rodríguez, Arenas-Ocampo, 2022, Ravens-Sieberer, Kaman, Erhart, Devine, Schlack, Otto 2022) . The basic division of health is as follows: physical and mental (Ohrnberger, Fichera, Sutton, 2017). This paper is focused on the impact of two mental diseases, anxiety and depression, on the quality of life of university students in Slovakia and on the relationship between self-reported health, on one hand, and self-reported anxiety and depression, on the other. Health is defined not only in the Preamble to the Constitution of the WHO (Grad, 2002), but also in relation to the quality of life. Cambridge Dictionary (Cambridge Dictionary. Health 2022) defines health as "the condition of the body and the degree to which it is free from illness, or the state of being well." In this paper, attention is focused on non-medical understanding (Haimi, Brammli-Greenberg, Waisman, Stein, Baron-Epel 2020, Costa, Salam, Duhig, Patel, Cameron, Voelker Bookhart, Coleman, 2020) of mental health. It is based on self-reported health by individuals. In the field of physical and mental health, enormous progress has been made in recent years, but at the same time, new diseases such as ADHD and the incidence of others, e.g. obesity is reaching the nature of a pandemic. Significant progress in the treatment of mental diseases and in many countries a significant reduction in the stigmatization of mental diseases go hand in hand with the unprecedented growth of prosperity in the West (Petrovič, Murgaš, Králik, 2021). On the other hand, the growth of mental diseases is a part of today's affluent society. Wang and Granados (Wang, Tapia Granados, 2019) pointed out the increase in GDP per capita in parallel with the deterioration of mental health in the form of depression and other manifestations. The result is the statement that in 2019 one out of eight inhabitants of the globe, i.e. 970 million people live with a mental disorder (World Health Organization, hereinafter referred to as WHO, 2022). National Institute of Mental Health (2022) indicates the number of adults with a mental illness in 2020 at 52.9 million, or one in five adult US residents.

This paper has three objectives. The first is to explore how perceived anxiety and depression affected students' quality of life during the pan-

demic. The second objective is to measure the quality of life of students affected by anxiety and depression and compare it with the quality of life of all students participating in the research. The third objective is to discover which of the variables are predictors of anxiety and depression and which are predictors of the quality of life.

2. Background

This section defines the key concepts discussed in this article: Health, Quality of life, Anxiety, Mental health, Depression, Epistemology, and Suicide. Concepts such as health and quality of life are terms that researchers define differently. Therefore, in the present paper, we use the definitions of well-known organizations (Cambridge Dictionary, 2022, American Psychiatric Association, 2020, Taber´s Medical Dictionary, 2022) or Encyclopaedia of quality of life and well-being research (Michalos, 2014).

2.1. Health

According to Ohrnberger et al. (2017), health, both mental and physical, together with education, intelligence and skills, is a part of the human capital. In the context of self-reported health, disease is identified by individuals with ill-being. However, the terms disease and ill-being mean something different. Disease expresses the pathology of the organism, its diagnosis and treatment are dealt with by doctors. On the other hand, ill-being, which is the opposite of well-being, together with well-being make up the quality of life. Individuals call ill-being a state when they subjectively evaluate their own life as not good (Ventriglio et. al., 2017).

2.2. Mental Health

The term 'mental health' is an umbrella term for mental disorders, psychosocial disabilities, mental states associated with significant suffering, impaired functioning or risk of self-harm. A mental disorder is characterized by a clinically significant impairment in an individual's cognitive abilities, emotional regulation, or behaviour. It is most often associated with anxiety and depression (WHO, 2022).

Anxiety is an emotion, American Psychological Association (APA, 2022) pointed out that anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure, sweating, accelerated by heat or panic attacks.

The present paper is focused on mental diseases, which differ from physical diseases. As a rule, they are not associated with acute pain, their treatment is long-term. It follows that they take the patient out of the working life for a long time and are therefore costly from a public health point of view. It is a realistic assumption that the long-term mental diseases have a stronger impact on the quality of life than the relative short-term physical diseases. The flu or a broken arm have a stronger acute impact on the quality of life, but it is usually short-lived.

According to WHO (WHO, 2022), mental disease *"is characterized by a clinically significant disturbance in the individual's cognition, emotional regulation, or behaviour. It is usually associated with distress or impairment in important areas of functioning. There are many different types of mental disorders. Mental disorders may also be referred to as mental health conditions. The latter is a broader term covering mental disorders, psychosocial disabilities and (other) mental states associated with significant distress, impairment in functioning, or risk of self-harm"*.

For the sake of quantification, mental diseases in the present paper are divided into three degrees:

1. Absence of mental diseases,
2. Anxiety and depression,
3. Suicidal manifestations, including very serious mental diseases in the form of suicidal thoughts and suicide attempts.

This paper explores the impact of mental illness, anxiety and depression on the quality of life of university students.

2.3. Anxiety

Anxiety is a lighter degree of mental diseases that requires attention as well. According to WHO, in 2019 there were 301 million people living with an anxiety disorder in the world, including 58 million children and adolescents (WHO, 2022).

2.4. Depression

Depression is a moderately severe mental disease in our classification. There are many definitions of depression (see also Salmanian, K., and Marashian 2022: 64; Masan and Hamarova, 2021: 10 & 11). The regional component of the World Health Organization (hereinafter referred to as WHO), Pan American Health Organization defines it as:

> a common but serious illness that interferes with daily life, the ability to work, sleep, study, eat, and enjoy life. Depression is caused by a combination of genetic, biological, environmental, and psychological factors. Some genetics researches indicate that risk for depression results from the influence of several genes acting together with environmental or other factors. (WHO, 2022)

According to the American Psychiatric Association, depression:

> is a common and serious mental disorder that negatively affects how you feel, think, act, and perceive the world. […] Women are more likely than men and younger adults are more likely than older adults to experience depression. While depression can occur at any time and at any age, on average it can first appear during one's late teens to mid-20s. (APS, 2020)

According to both definitions, depression is an illness.

Depression is a disease of modernity. The depressiogenic social environment is significantly involved as a result of the decline of social capital and the increase of inequality and loneliness. The incidence of anxiety and depression is increasing in the West. In countries with high per capita income, the prevalence is higher than in countries with medium and low income per capita. The differences are linked to the prevailing different cultural values in these countries (Hidaka, 2012). Anxiety, depression, panic, phobias, obsessive-compulsive disorder and post-traumatic stress have the highest prevalence among common mental disorders (Heim et al., 2017; cf. Butz et al., 2024: 7).

2.5. Quality of life

Quality of life is one of the concepts with which society tries to grasp and explain the complexity of the contemporary world (cf. Laca et al., 2024: 54). Its essence is a cognitive and emotional evaluation of satisfaction with life according to the idea that each individual has of his life. This assessment is followed by knowledge from other scientific fields, but psycho-logical knowledge is key, and therefore it can be concluded that the quality of life is a 'psychological matter'. Human life takes place in a specific geographical space, so the previous statement can be supplemented: the quality of life is a 'psychological and geographical matter'. Researchers deal with the impact of mental disorders on the quality of life in order to bring valid knowledge applicable in public health and public policy. The success of their efforts has two essential prerequisites. The first is the acceptance of subjectivity in the evaluation of one's own mental health, for which the term 'self-reported health' was used, as well as the subjectivity in the evaluation of the quality of one's own life. The second is the acceptance of the necessity of a holistic approach to the quality of life, based on the current existence of not only wellbeing, but also ill-being in human life (Pavlikova, Tavilla, 2023). The election of Martin Seligman as president of the American Psychological Association contributed on the one hand to the boom in the study of the quality of life (Seligman, 2019), but at the same time it contributed to the identification of the quality of life in the current affluent Western society with well-being.

Quality of life is therefore a concept that cannot be measured, and, more specifically, what can be measured are its indicators. The overview of concepts of the quality of life was pointed out by Petrikovičová et al. (2022). The quality of life is connected with the concept of 'good life' (Widmer, 2014), which Aristotle called 'eudaimonia' in his Nicomachean Ethics (Aristotle, 2009). Veenhoven (2014: 5265) defines the quality of life in the sense of a good life: *"The degree to which a life meets various standards of the good life"*. The quality of life of a student is the quality of life of one specific demographic category, which is not only determined by age, but

also by above-average education. Diener (1994) describes it as a student's overall subjective appraisal of the quality of one's life.

The quality of life is experiencing an extensive boom, behind which the development of its epistemology lags behind. Unsolved questions are:

Is there one quality of life or are there more qualities of life? Veenhoven (2000) states that there are four qualities of life, Petrikovičová et al. (2022) oppose this and point out that the quality of life is one. They base their claim on the fact that an individual has different social ties and status in his life, "*He has a somatic, family, sexual, parental, and work life, and spends his free time. He is employed or owns his own business, is a sports fan, a voter, has hobbies and interests, and is active in the community. In terms of the quality of life, these forms of his life are the health domain, the domain focused on family life, and other domains. The same person is always being described. From this it is derived that quality of life is one of many domains that can be quantified with many indicators."*

2.6 Epistemology

The quality of life is related to the concepts of well-being and happiness (cf. Guttesen and Kristjánsson, 2022: 279 & 281), which some scientists identify with the quality of life or are considered as interchangeable with it (Tubergen et al., 2018, Medvedev, Landhuis 2018). Bieda et al. (2019) also pointed out that quality of life and satisfaction with life are interchangeable with positive mental health. Ruggeri et al. (Ruggeri, 2020) believe that well-being is more than happiness and satisfaction with life. Similarly, El-Hassan pointed out that the quality of life or life satisfaction is a component of a student's subjective well-being (SWB). Other scientists on the contrary claim that the quality of life is not interchangeable with well-being and happiness (Susniene, Jurkauskas, 2009, Sirgy, 2012, Hall, 2014, Skevington, 2018). They also include Murgaš and Petrovič (2022), who created a quality of life model in the form of a matrix of ill-being and well-being on the horizontal line and poor quality of place and good quality of place on the vertical line. Acceptance of the unlimited impact of the growth of prosperity on the quality of life on one hand and its rejection on the other hand, known as a validity dispute, or the invalidity of Easterlin's paradox (Smith, 2014). In this paper, the quality of life is conceptualized as one with two dimensions. The personal subjective dimension consists of well-being and ill-being, the spatial, objective dimension consists of poor quality of place and good quality of place. A synonym of quality of life is satisfaction with life, neither well-being nor happiness are its synonyms, nor are they interchangeable with it, because they are its parts. This epistemological insight is also applied in the present paper.

2.7 Suicide

One way to define suicide is through existential philosophy (cf. Khan et al., 2024a: 84; Khan et al., 2024b: 92-93 & 94-95). Existential philosophy deals with the challenges of human existence. It addresses questions about the purpose of human life, what it means to take responsibility for one's own existence, and to what extent individuals need to give their lives meaning and purpose. Religious existentialists believe that human life has a higher purpose, and for Søren Kierkegaard, who is often regarded as the founder of religious existentialism, that purpose involved the decision to open oneself up to and connect with God. One could ask here whether existential philosophy adds anything to the psychological description of this state. Psychologists often do not view this state of neurotransmitters in the brain (at the moment the decision to commit suicide is made) as the direct cause of mental problems but rather as a consequence of interactions with oneself and the environment. Therefore, it is seen as more important to address that, rather than merely medicating people, although that may certainly be necessary. It seems quite clear that neurotransmitters are essential in regulating emotions (Guttesen, 2024b: 18; 2024a, Zalec, Pavlikova, 2019), such as happiness (Guttesen, 2024a: 912), depression, anxiety, anger (cf. Guttesen and Kristjánsson, 2024: 807), etc., but their imbalance is not viewed in the same way as, for instance, someone who does not produce insulin (diabetes). Repeated

disappointments in life would then diminish joy and disrupt serotonin signalling. In psychiatry, there is less emphasis than in psychology on addressing the causes of social learning (although this is, of course, not entirely ignored) and more on tackling the immediate cause: restoring serotonin balance. However, both clinical psychology and psychiatry face significant challenges, as the theories are relatively weak in existential terms, and there are many unanswered questions when it comes to understanding why antidepressants work (or sometimes don't work at all) and why cognitive behavioural therapy works (and sometimes doesn't work at all). For this reason, several caveats must be made regarding this brief overview (which is somewhat simplified) of what a psychological description of this condition entails.

At first glance, it seems that suicide should rather be defined, in the spirit of Kierkegaard, as not wanting to be oneself. However, this is not clear because it appears that different types of suicides indicate that different types of despair lead to suicide. This is, for instance, the thesis of the Norwegian philosopher and theologian Marius Timmann Mjaaland, who argues that suicide can be a consequence of both types of despair. He supports this by comparing Émile Durkheim's classification of four main types of suicide with the four stages of despair that Kierkegaard (2006) differentiates in *The Sickness unto Death*:

1. Despair of Infinitude
   (due to the lack of Finitude)
2. Despair of Finitude
   (due to the lack of Infinitude)
3. Despair of Possibility
   (due to the lack of Necessity)
4. Despair of Necessity
   (due to the lack of Possibility)

Mjaaland matches these four forms of despair to the following types of suicide, according to Durkheim's classification: egoistic suicide, altruistic suicide, anomic suicide, and fatalistic suicide (Mjaaland, 2007: 4-5). In the first category are those who commit suicide in a state of emotional or apathetic detachment (Durkheim, 2002: 257). They belong to a socially weak group to which they are minimally connected, leading them to assess their social obligations more in terms of their own interests than the interests of the group. Social expectations become burdensome, and the idea of suicide becomes a kind of privilege (Durkheim, 2002: 167-168) and can, for example, stem from depression that torments such an individual (Durkheim, 2002: 173). In the second category are those who do not stand with themselves and rather submit to the will of a socially strong group and/or a higher cause. They commit suicide in a state characterized by duty, mysticism, or the desire for a heroic death (Durkheim, 2002: 257). While egoistic suicide arises from the individual's inability to find a basis for their existence, the person who commits altruistic suicide bases their existence on a foundation beyond this life (Durkheim, 2002: 219). The third category includes those who commit anomic suicide, whose condition is characterized by resentment and disgust, which could lead to violent consequences or homicide (Durkheim, 2002: 257). Durkheim does not discuss the fourth category, those who commit fatalistic suicide, but he envisions this might apply to slaves or individuals who are persecuted or oppressed (Durkheim, 2002: 239). Such suicides could break the chains of unbearable circumstances. Durkheim argues that the first two categories result from social integration, while the latter two stem from social regulation. The concepts of social integration and social regulation are contrasted, and Durkheim identifies them as influencing factors when it comes to the social reasons people commit suicide. In this regard, sociological research examines, for example, the effects of family cohesion and parental socialization on youth suicide rates.

3. Method

This section discusses the methodological choice made for this paper. The present study applies both secondary research and primary research. Generally, primary sources of data, that is items that are original to the problem under study, should always be used where possible. However, as Cohen and Manion point out, the value:

> of secondary sources should not be minimized. There are numerous occasions where

> a secondary source can contribute significantly to more valid and reliable historical research than would otherwise be the case. (Cohen and Manion, 1994: 51)

Bogden and Biklen also acknowledge that "quantitative data collected by (evaluators, administrators, other researchers) can be conventionally useful (Bogden and Biklen, 1992: 148). In this research, we deal with secondary quantitative data.

Quantitative research is sometimes said to allow for too much generalisation (Flick, 2014: 13). It "generates 'shallow' but broad data – not a lot of complex detail obtained from each participant" (Braun and Clarke, 2014: 4). Typically, this is counter-acted against when 'lots of participants take part (to generate the necessary statistical power)' (Braun and Clarke, 2014: 4), which – as we base the data on Eurostat, WHO, and large-scale studies – is the case for the present research. It is also worth noting that although when exploring a novel research question, one would typically need to collect primary data, but "if you want to synthesize existing knowledge, analyze historical trends, or identify patterns on a large scale, secondary data might be a better choice" ("Research methods | Definitions, types, examples," 2019). As this is partially the case for the present study, we justify our methodological choice based on the robustness and validity of the said approach for addressing the objectives of this papers. Therefore, in addition to relying on secondary data, in the present paper, the variables are determined by an online questionnaire in which university students in Slovakia indicate answers on the Cantril scale of 0-10. The questions are listed in the appendix. The key questions are focused on the impact of the pandemic on the psyche and the quality of life.

4. Results

This section introduces the findings of this article.

In 2019, i.e. before the outbreak of the pandemic, 970 million people worldwide lived with mental diseases, i.e. every eighth person. Data on the incidence of chronic depression in the selected European countries and Slovakia for 2019 are shown in Table 1. Despite the fact that European countries as a whole are among the states with a very high level of development according to the HDI Index, there are significant differenc-

Table 1 Percentage of people with chronic depression, in 2019, in the countries with the lowest incidence, in Slovakia, and in the countries with the highest incidence together and aged 15-24 (Eurostat, 2017)

Rank	Country	Persons in % Total	Country	Persons in % Age 15-24
1.	Romania	1.0	Romania	0.0
2.	Bulgaria	2.7	Greece	0.4
3.	Malta	3.5	Serbia	0.6
4.	Greece	3.8	Bulgaria	0.7
5.	Ireland	3.9	Poland	1.1
9.	Slovakia	4.3	Slovakia	1.7
28.	Croatia	11.6	Germany	9.6
29.	Germany	11.6	Norway	10.9
30.	Sweden	11.7	Luxembourg	11.9
31.	Portugal	12.2	Finland	14.1
32.	Iceland	´15.6	Iceland	14.7
	Average EU 27	´7.2	average EU 27	

es between them in the incidence of the chronic depression.

Even in Europe, the rule of higher depression values applies in countries with high per capita incomes, although there are exceptions to this rule. In the category of 'inhabitants together', as well as in the age category of 15-24 years, Slovakia is among the countries with below-average values of depression.

In 2020, as a result of the COVID-19 pandemic, there was a significant increase in the number of people affected by anxiety and depression. According to the first estimates, it is a 26% increase in the case of anxiety and a 28% increase in the case of depression (WHO, 2022). In China, a quarter of psychiatrists experienced anxiety and depression during the pandemic (Li et al., 2022).

4.1. Impact of mental disease on the quality of life

Diseases or illnesses that do not disturb well-being are very few. Researchers pay attention to the relationship between the quality of life and mental diseases (Evans et al., 2007, Li et al., 2002, Katschnig et al., 2006, Connell et. al., 2012). Among scientists investigating the impact of the mental diseases on the quality of life, there is consensus in the knowledge that mental disorders erode the quality of life (Hansson, 2002, Brenes, 2007).

In terms of mental health, high quality of life values are associated with a sense of control over one's life, autonomy and choice, a positive perception of oneself, a sense of belonging and hope. In terms of mental health, low quality of life values are associated with a lack of control over one's life, autonomy and choice, feelings of anxiety, social exclusion and hopelessness (Connell et al., 2012).

4.2. Measurements and findings

In our research, no metal diseases were declared by 20.9% of students, anxiety by 47.2%, depression by 23.1%, suicidal thoughts by 6.8% and suicide attempts by 2% of students. The category 'Suicidal thoughts and attempts' is combined into the title 'Suicidal manifestations'.

All measurements are on the Cantril scale of 0-10. The first is the measurement of quality of life values and other variables (Table 2). The measured values are surprisingly high considering the end of the pandemic.

A possible explanation is the relief after the end of the pandemic and the lifting of all restrictive measures by the Slovak government and health authorities. The war conflict in Ukraine during this period was relatively short, so its devastating effect on the psyche of the inhabitants of the countries of the Central and Eastern Europe was not as pronounced as it is at the end of 2022. Health values are high due to the age of university students in whom serious health problems are rare. If the quality of life values are marked as surprisingly high, then the trust values are surprisingly low. Relationships with the loved ones before the pandemic and trust are a part of the social capital, which is considered as a strong predictor of the quality of life (Bilajac et al., 2014, Mori et al., 2022). The measurement shows that social capital can be significantly differentiated internally.

Table 3 can be interpreted as follows: (i) the measured values of the quality of life are high except for one category of women, the highest are in the category 'No metal diseases', and then they decrease in accordance with the severity of the mental disease. (ii) Values in the category 'Men and women with suicidal behaviour' have a limited informative value for a relatively small number of individuals. (iii) Women's quality of

Table 2 Values of quality of life and other variables in university students. The social relationships were not measured on the scale of 0-10

Variables	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
Men	7.57	8.60	x	8.09	5.14
Women	7.79	9.00	x	8.10	5.21

Table 3 Quality of life of university students, men and women, according to the type of impact of mental health on the quality of life.

Categories of men and women	Quality of life	
	Country	Persons in % Total
All men and women	7.57	7.79
Men and women - no metal diseases	7.93	8.02
Men and women with anxiety and depression	6.65	7.15
Men and women with suicidal attempts	6.86	5.68

Table 4 Verbal assessment of correlations and predictors.

Correlation value	Verbal Indicationof Correlation	Verbal Indication of the Predictor
⩽ 0,09	No correlation	None
0,10 - 0,19	Very small correlation	None
0.20 - 0.29	Small correlation	None
0.30 - 0.49	Medium correlation	Predictor
0.50 - 0.69	Large correlation	Strong predictor
0.70 - 0.89	Very large correlation	Very strong predictor
0.90 ⩾	Near perfect correlation	Near perfect predictor

life values are higher than men's quality of life values, except for one category.

The second measurement is the measurement of correlations, Spearman's correlation coefficient is used. For verbal evaluation of correlations, de Vaus (2020) developed a table, which Petrovič and Maturkanič (2022) supplemented with verbal evaluation of predictors. Their evaluation is based on the premise that the indicator is a variable with a correlation coefficient value of 0.30 or more (Table 4).

Table 3 can be interpreted as follows: (i) the measured values of the quality of life are high except for one category of women, the highest are in the category 'No metal diseases', and then they decrease in accordance with the severity of the mental disease. (ii) Values in the category 'Men and women with suicidal behaviour' have a limited informative value for a relatively small number of individuals. (iii) Women's quality of life values are higher than men's quality of life values, except for one category.

The second measurement is the measurement of correlations, Spearman's correlation coefficient is used. For verbal evaluation of correlations, de Vaus developed a table, which Petrovič and Maturkanič (2022) supplemented with verbal evaluation of predictors. Their evaluation is based on the premise that the indicator is a variable with a correlation coefficient value of 0.30 or more (Table 4).

The following tables show the correlations of the variables, the basic characteristics of the correlations are provided by Table 4 with correlations of university students together. Tables 5-11 show the correlations of the three categories of the variable 'psychological impact' separately for men and separately for women.

Table 6 shows that the category 'no mental diseases' in men correlates with the quality of life at the level of very small correlation, it is negatively correlated with the other variables. We accept the premise of the predictor of one variable, which is another variable reaching

Table 5 Correlations of variables for university students together.

Variables	Impact on psyche	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
Impact on psyche	1					
Quality of life	0.30	1				
Health	0.05	0.30	1			
Social relationships	-0.01	-0.03	-0.05	1		
Relationships before the pandemic	0.17	0.50	0.33	-0.01	1	
Trust	-0.15	0.31	0.23	-0.04	0.29	1

Table 6 Correlations of the category "No impact on the psyche", quality of life and other variables in men.

Variables	Impact on psyche	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
No impact on the psyche	1					
Quality of life	0.13	1				
Health	-0.40	0.22	1			
Social relationships	-0.09	-0.24	-0.02	1		
Relationships before the pandemic	-0.01	0.50	0.49	-0.29	1	
Trust	-0.03	-0.02	-0.34	-0.10	-0.13	1

Table 7 Correlations of the category "No impact on the psyche", quality of life and other variables in women.

Variables	Impact on psyche	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
No impact on the psyche	1					
Quality of life	0.17	1				
Health	-0.02	0.17	1			
Social relationships	-0.05	0.04	0.01	1		
Relationships before the pandemic	-0.04	0.41	0.32	0.18	1	
Trust	-0.03	-0.35	0.00	0.04	-0.09	1

Table 8 Correlations of the category "Anxiety, depression", quality of life and other variables in men. Own research.

Variables	Anxiety, depression	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
Anxiety, depression	1					
Quality of life	-0.15	1				
Health	0.04	0.29	1			
Social relationships	-0.03	0.31	-0.13	1		
Relationships before the pandemic	0.22	0.14	0.00	0.14	1	
Trust	-0.01	0.32	0.16	0.08	0.21	1

Table 9 Correlations of the category "Anxiety, depression", quality of life and other variables in women. Own research.

Variables	Anxiety, depression	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
Anxiety, depression	1					
Quality of life	-0.37	1				
Health	-0.15	0.39	1			
Social relationships	-0.03	-0.02	-0.18	1		
Relationships before the pandemic	-0.29	0.36	0.32	-0.32	1	
Trust	-0.45	0.35	0.16	0.04	0.20	1

Table 10 Correlations of the "Suicidal Manifestations" category, quality of life and other variables in men. Own research.

Variables	Suicidal manifesta-tions	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
Suicidal manifestations	1					
Quality of life	-0.35	1				
Health	-0.59	0.54	1			
Social relationships	0.09	-0.26	0.10	1		
Relationships before the pandemic	-0.80	0.60	0.57	-0.19	1	
Trust	-0.30	0.63	0.32	0.27	0.59	1

Table 11 Correlations of the category "Suicidal manifestations", quality of life and other variables in women. Own research.

Variables	Suicidal manifestations	Quality of life	Health	Social relationships	Relationships before the pandemic	Trust
Suicidal manifestations	1					
Quality of life	0.40	1				
Health	0.39	0.79	1			
Social relationships	0.31	0.58	0.54	1		
Relationships before the pandemic	0.09	0.34	0.51	0.25	1	
Trust	0.56	0.60	0.56	0.46	0.50	1

the value of the correlation coefficient of these two variables of 0.30 or more (APA, 2019, Bilajac et al., 2014, Mori et al., 2022, Vaus, 2020, Petrovič, Maturkanič, 2022, Murgaš et al., 2022, Maturkanič, et al. 2022, Kobylarek, et al., 2022, Leskova, Uhal 2020, Neziri et al, 2024, Macku, et al., 2021, Murgaš et al., 2023, Pavlíkova et al., 2023, Petrovič, Murgaš, Králik, 2023, Valachová et al., 2024, Tkáčová et al., 2021, 2023). Based on it, the values of the correlation coefficients of all variables and all three categories are assessed. It follows from the premise that not a single variable is a predictor of the category 'no mental diseases'. For women (Table 7), the measured values are similar, with the exception of the correlation of the category 'no mental diseases', which is also positively correlated with social relations. As with men and women, not a single variable is a predictor of the 'no mental diseases' category.

The values in the category 'anxiety, depression' are among the 'negative indicators' for which the lowest possible values are desired. In men (Table 8), anxiety and depression correlate negatively and low. Not a single variable is a predictor of the category 'anxiety, depression'. For women (Table 9), anxiety and depression correlate with other variables only negatively. The mean value of the negative correlation of anxiety, depression with confidence (-0.45) and quality of life (-0.37) is worth noting. It means that as the value of anxiety and depression increases, the value of the trust and quality of life variables decreases. Because the category 'anxiety, depression' belongs to the 'negative indicators', trust and quality of life are predictors of this category, despite the negative values of the correlation coefficients.

The values in the 'Suicidal manifestations' category are also among the 'negative indicators', their correlation coefficients with variables differ from the previous category. There are differences in the values of the correlation coefficients for men (Table 7) and women (Table 8) as well as in the predictors. For men, the correlations are all negative except for one variable (social relations). It expresses the expected fact that the higher the values of suicidal expressions, the lower the values of pre-pandemic relationships, health, quality of life and trust, and vice versa. Because the category 'suicidal behavior' belongs to the 'negative indicators', the variables quality of life, health, relationships before the pandemic and trust are its predictors.

In women, 'Suicidal manifestations' are positively correlated with all life variables, which can surprisingly be interpreted as the fact that the growth of suicidal manifestations is accompanied by an increase in confidence with a large correlation, an increase in the quality of life,

health and social relationships with a medium correlation. Because the category 'Suicidal manifestations' belongs to the 'negative indicators', variables trust, quality of life, health and social relations are not its predictors. Up to three levels of subheading are permitted. Subheadings should not be numbered.

Discussion

At the outset, the three objectives of this paper were introduced. The first was to explore how perceived anxiety and depression affected the quality of life of students during the pandemic. Using Spearman's correlation coefficient, it can be concluded that it is different for men and women. Anxiety and depression are negative categories, and therefore their lowest possible value is desired. The values of the correlation coefficient are negative for both men and women, which results in the following conclusion: anxiety and depression in men affected the quality of life according to Table 3 at the 'very small' level and for women at the 'medium' level.

The second objective was to measure the quality of life of students affected by anxiety and depression and compare it with the quality of life of all students participating in the research. Measured values of the quality of life according to Table 2 for all university students in men are 7.57, in women they are higher – 7.79. In the case of students affected by anxiety and depression, the measured values are, as expected, lower, for men 6.65 and for women again higher – 7.15.

The third objective was to discover which of the variables are predictors of anxiety and depression and which are predictors of the quality of life. As mentioned above, the predictor of anxiety and depression is a variable that correlates with anxiety and depression at the positive level of the correlation coefficient of 0.30 and higher. In the case of a negative variable, which is a variable with a desired value as low as possible, the condition of a negative correlation value of 0.30 and higher applies. The measurements showed that in men there is no predictor of anxiety and depression, in women it is the confidence and quality of life. The value of the correlation between trust and anxiety and depression is surprising considering the level of trust in women (5.21) on a scale of 0-10 according to Table 2.

Unlike anxiety and depression, quality of life is a positive variable, which can be interpreted as the highest possible values of the quality of life being desired. For students suffering from anxiety or depression, the predictors of quality of life are trust and social relationships, for female students, health, relationships before the pandemic and trust.

An epistemological insight emerges from the measurements of correlations of variables: correlations of variables in women are higher than correlations in men, they also differ in which variables are predictors.

Conclusion

Several authors deal with the quality of life of university students. Researchers also responded to the pandemic and examined its impact on the quality of life of university students during the pandemic.

Evans et al. (2007) explore the impact of mental diseases on the quality of life, dividing the studied individuals into three groups: severe mental illness, common mental disorder and no disorder. In this paper, mental diseases are divided into groups: a) no mental diseases, b) serious mental diseases in the form of anxiety and depression and c) very serious mental diseases in the form of suicidal thoughts and suicide attempts. From the aforementioned division, attention is paid to serious mental diseases. The research took place in the months of April, May and June 2022. Students of bachelor's, master's and doctoral studies at Slovak universities participated in it, N=389. Attention is focused on students who felt anxiety and depression.

In the present paper, all variables are determined by an online questionnaire in which university students in Slovakia indicate answers on the Cantral scale of 0-10. The questions are listed in the appendix. The key questions are focused on the impact of the pandemic on the psyche and the quality of life.

Relationships between variables are quantified using Spearman's correlation coefficient. Variables that can be assumed to influence the

quality of life and mental health of university students are identified. These variables are anxiety and depression, quality of life and further health (both physical and mental), social relationships, relationships with the loved ones before the pandemic, and trust. The inclusion of health, anxiety and depression and quality of life is related to the focus of this paper. The variables – social relations, relations with the closest ones before the pandemic and trust – express social capital. Ohrnberger et al. (2017) point out that social capital together with lifestyle is a factor influencing the relationship between physical and mental health. Loneliness as a form of social relationships is a strong predictor of worsening mental health.

Acknowledgments

This article was supported by the grant VEGA 1/0578/24 of the Scientific Grant Agency of the Ministry of Education Science Research and Sport of the Slovak Republic and project KEGA n. 011KU-4/2023.

References

1. APA (American Psychiatric Association) (2022). *Anxiety. Headword.* Available on: https://www.apa.org/topics/anxiety.
2. APA (American Psychiatric Association) (2019). *Depression Assessment Instruments*. Available on: https://www.apa.org/depression-guideline/assessment.
3. APS (American Psychiatric Association) (2020). *What Is Depression?* Available on: https://www.psychiatry.org/patients-families/depression/what-is-depression.
4. ARISTOTLE (2009). The Nicomachean Ethics. Oxford University Press: Oxford, New York, pp. 227.
5. BEISLAND, E. G., GJEILO, K. H., ANDERSEN, J. R., BRATAS, O., BØ, B., HARALDSTAD, K., HJELMELAND, I. H. H., IVERSEN, M. M., LØYLAND, B., NOREKVAL, T. M., RIISER, K., ROHDE, G., URSTAD, K. H., UTNE, I., FLØLO, T. N. (2021). Quality of life and fear of COVID-19 in 2600 baccalaureate nursing students at five universities: a cross-sectional study. *Health Qual Life Outcomes* 19, 198. DOI: 10.1186/s12955-021-01837-2.
6. BIEDA, A., HIRSCHFELD, G., SCHONFELD, P., BRAILOVSKAIA, J., LIN, M., MARGRAF, J. (2019.) Happiness, life satisfaction and positive mental health: Investigating reciprocal effects over four years in a Chinese student sample. *Journal of Research in Personality*, *78*, 198–209. DOI: 10.1016/j.jrp.2018.11.012.
7. BILAJAC, L., MARCHESI, V. V., TESIC, V., RUKAVINA, T. (2014). Life satisfaction, optimism and social capital as predictors of mental health of the recipients of financial welfare from the state. *Psychiatria Danubina*, *26*, 435–441.
8. BOGDEN, R. C., BIKLEN, S. K. (1993). *Qualitative Research for Education: An introduction to theory and methods*. Second edition. Allyn and Bacon: Boston, London, Toronto, Sidney, Tokyo, Singapore.
9. BOKUNIEWICZ, S. (2020). Tolerance of uncertainty and ambiguity of the situation and anxiety as a state and as a feature. *Journal of Education Culture and Society*, 11(2), 224–236. DOI: 10.15503/jecs2020.2.224.236.
10. BOLEA, Ş. (2020). The Courage To Be Anxious. Paul Tillich's Existential Interpretation of Anxiety. *Journal of Education Culture and Society*, 6(1), 20–25. DOI: 10.15503/jecs20151.20.25.
11. BRAUN, V., CLARKE, V. (2014). Successful Qualitative Research: A Practical Guide for Beginners. SAGE Publications.
12. BRENES, G. A. (2007). Anxiety, depression, and quality of life in primary care patients. Prim Care Companion J *Clin Psychiatry*, 9(6). 437–43. DOI: 10.4088/pcc.v09n0606.
13. BUTZ, M., MRAZOVA, M., DEACONU, D., CZIRFUSZ, A. (2024). Homelessness and suicidality: How do new emigrants confront the dilemma? Evidence from existing research conducted in Canada. *Clinical Social Work and Health Intervention*, 15(3), 6-13. DOI: 10.22359/cswhi_15_3_01.
14. CD (Cambridge Dictionary) (2022). *Health*. Available on: https://dictionary.cambridge.org/dictionary/english/health.
15. CARMONA-GONZALEZ, M., FLORES-GARNICA, A., SANCHEZ-RA-

MOS, MA., ORTIZ-RODRIGUEZ, M. A., ARENAS-OCAMPO, M L, GARCIA-SERRANO LUZ, A., CAMACHO-DIAZ, B. H. (2022). Impact of the COVID-19 pandemic on the quality of life of older adults. *Journal of Global Health Reports*., 6:e2022032. DOI: 10.29392/001c.37468.

16. COHEN, L., MANION, L. (1994). *Research methods in education.* Fourth edition. Routledge: London, UK, and New York, US.
17. CONNELL, J., BRAZIER, J., O'CATHAIN, A., LLOYD-JONES, M. (2012) *Paisley, S. Quality of life of people with mental health problems: a synthesis of qualitative research. Health Qual Life Outcomes,* 10, 1–16. DOI: 10.1186/1477-7525-10-138.
18. COSTA, O. S., SALAM, T., DUHIG, A., PATEL, A. A., CAMERON, A., VOELKER, J., BOOKHART, B., COLEMAN, C. I. (2020). Specialist physician perspectives on non-medical switching of prescription medications. *Journal of Market Access & Health Policy*, 8(1), 1–9. DOI: 10.1080/20016689.2020.1738637.
19. DE VAUS, D. (2020). *Surveys in Social Research*, 5th ed.; Routledge: London, UK, pp. 422.
20. DIENER, E. (1994). Assessing Subjective Well-Being: Progress and Opportunities. *Social Indicators Research,* 31, 103–157.
21. DURKHEIM, E (2002). *Suicide: a study in sociology*: Routledge: London, UK.
22. EL-HASSAN, K. (2014). *Student Quality of Life. In Encyclopedia of Quality of Life and Well-Being* Research, Michalos, A.C., Eds.; Springer: Dordrecht, Netherlands, DOI: 10.1007/978-94-007-0753-5_2890.
23. EUROSTAT (2017). *Persons reporting a chronic disease – depression.* Available on: https://ec.europa.eu/eurostat/data-browser/view/HLTH_EHIS_CD1E__custom_4162307/default/bar?lang=en.
24. EVANS, S., BANERJEE, S., LEESE, M., HUXLEY, P. (2007). The impact of mental illness on quality of life: A comparison of severe mental illness, common mental disorder and healthy population samples. *Qual Life Res.,* 16(1), 17–29. DOI: 10.1007/s11136-006-9002-6.
25. FIGUEROA-QUINONES, J., CJUNO, J., MACHAY-PAK, D., IPANAQUE-ZAPATA, M. (2022) Quality of Life and Depressive Symptoms Among Peruvian University Students During the COVID-19 Pandemic. *Frontiers in Psychology*, 13, 1664–1678. DOI: 10.3389/fpsyg.2022.781561.
26. FLICK, U. (2014). *An Introduction to Qualitative Research*. 5th. ed. Sage: CA.
27. FREEMAN, H., SARTORIUS, K. (2006). *Quality of Life in Mental Disorder*, 2nd ed.; John Wiley& Sons: Chichester, pp. 368.
28. GRAD, F. P. (2002). *The Preamble of the Constitution of the World Health Organization*. Bulletin of the World Health Organization, 80, 981–984. https://apps.who.int/iris/handle/10665/268691.
29. GUTTESEN, K. (2024a). The philosophy of emotions: Implementing character education through poetry. *Educational Philosophy and Theory*, 56(9), 910-025. DOI: 10.1080/00131857.2024.2332694.
30. GUTTESEN, K. (2024b). Character education through poetic inquiry: Teaching poetry as a means of moral self-cultivation. *Journal of Poetry Therapy*, 1-23. DOI: 10.1080/08893675.2024.2380848.
31. GUTTESEN, K., KRISTJANSSON, K. (2022). Cultivating virtue through poetry: an exploration of the characterological features of poetry teaching. *Ethics and Education*, 17(3), 277-293. DOI: 10.1080/17449642.2022.2114062.
33. GUTTESEN, K., KRISTJANSSON, K. (2024). Character education, poetry, and wonderment: Retrospective reflections on implementing a poetry programme in a secondary-school setting in Iceland. *Scandinavian Journal of Educational Research*, 68(4), 803-823. DOI: 10.1080/00313831.2023.2192737.
34. HALL, A. (2014). *Concept of life satisfaction. In Encyclopedia of quality of life and well-being* research, Michalos A.C., Eds.; Springer: Dordrecht, Netherlands, pp. 3599–3601.
35. HAIMI, M., BRAMMLI-GREENBERG, S., WAISMAN, Y., STEIN, N., BARON-EPEL, O. (2020) The role of non-medical factors

in physicians' decision-making process in a paediatric telemedicine service. *Health Informatics Journal*, 26, 1152–1176. DOI: 10.1177/1460458219870660.
36. HANSSON, L. (2002). Quality of life in depression and anxiety. *International Review of Psychiatry*, 14:3, 185–189. DOI: 10.1080/09540260220144966.
37. HEIM, E., WEGMANN, I., MAERCKER, A. (2017) Cultural values and the prevalence of mental disorders in 25 countries: A secondary data analysis. *Social Science & Medicine*, 189. DOI: 10.1016/j.socscimed.2017.07.024.
38. HIDAKA, B. H. (2012). Depression as a disease of modernity: Explanations for increasing prevalence. *Journal of Affective Disorders*, 140, 205–214. DOI: 10.1016/j.jad.2011.12.036.
39. JULIAN, L. J. (2011). Measures of anxiety: State-Trait Anxiety Inventory (STAI), Beck Anxiety Inventory (BAI), and Hospital Anxiety and Depression Scale-Anxiety (HADS-A). *Arthritis Care Res* (Hoboken), 63, 467–72. DOI: 10.1002/acr.20561.
40. KATSCHNIG, H. (2006). How Useful Is the Concept of Quality of Life In Psychiatry? *In Quality of Life in Mental Disorder*, 2nd ed.; Katschnig, H., Freeman, Sartorius, H., Eds.; John Wiley& Sons: Chichester, pp. 3–18.
41. KESKIN, G. (2021). Self-Report measurement of depression, anxiety, and stress caused by COVID-19 pandemic in senior undergraduate dental students. *Pesquisa Brasileira em Odontopediatria e Clínica Integrada* , 21, 1–9. DOI: 10.1590/pboci.2021.102.
42. KHAN, N., ALI, I., AHMAD, Z., HUSSAIN, S., RASOOL, F. (2024a). An investigation into the Role of early Marriage in developing suicidal Ideation among Girls in Dir, Khyber Pakhtunkhwa, Pakistan. *Clinical Social Work and Health Intervention*, 15(4), 82-90. DOI: 10.22359/cswhi_15_4_10.
43. KHAN, N., HUSSAIN, N., NAZ, A., AHMAD, U. (2024b). Homelessness and suicidality: How do new emigrants confront the dilemma? Evidence from existing research conducted in Canada. *Clinical Social Work and Health Intervention*, 15(4), 91-97. DOI: 10.22359/cswhi_15_4_11.
44. KIERKEGAARD, S. (2006). *The writings of Søren Kierkegaard.* [Volume] 11. Lilien paa Marken og Fuglen under Himlen. Tvende ethisk-religieuse Smaa-Afhandlinger. The Sickness to Death. »Ypperstepræsten« – »Tolderen« – »Synderinden«. København: Gads.
45. KOBYLAREK, A., BŁASZCZYNSKI, K., SLOSARZ, L., MADEJ, M., CARMO, A., HLAD, L., KRALIK, R., AKIMJAK, A., JUDAK, V., MATURKANIC, P., BIRYUKOVA, Y., TOKAROVA, B., MARTIN, J. G., PETRIKOVICOVA, L. (2022). *The Quality of Life among University of the Third Age Students in Poland, Ukraine and Belarus. Sustainability*, 14, 4, 2049. doi:10.3390/su14042049.
46. KONDRLA, P., TRSTENSKY, F., DATELINKA, A. (2023). Social teaching of the Church and the values of a sustainable society, *Acta Missiologica* 17(2), 142-155.
47. LACA, S., OLAH, M., BENDOVA, S., LACA, P., PLANKA, T., BOZIK, J. (2024). The View of Social Work on the sexuality of Persons with health Disadvantages – Mental Disabilities. *Clinical Social Work and Health Intervention*, 15(4), 82-90. DOI: 10.22359/cswhi_15_4_07.
48. LESKOVA, L., UHAL, M. (2020). The effects of Covid-19 on the Labor market and gender segregation with regard to helping professionals working in the field of Social services. *Acta Missiologica* 14(2), 182–197.
49. LI, M., XIA, L., YANG, Y., ZHANG, L., ZHANG, S., LIU, T., LIU, Y., KASLOW, N. J., JIANG, F., TANG, Y-L., LIU, H. (2022). Depression, Anxiety, Stress, and Their Associations With Quality of Life in a Nationwide Sample of Psychiatrists in China During the COVID-19 Pandemic. *FrontPsychol*, 13, DOI: 10.3389/fpsyg.2022.881408.
50. LIANG, C., SUN, J. A. (2022). Study of the Happiness of Chinese University Students and Its Influencing Factors—A Case Study of Beijing Universities. *Sustainability*, 14, 1–15. DOI: 10.3390/ su142316057.
51. LIU, CH., LEE, Y-CH., LIN, Y-L., SHANG-YU, YANG, S-Y. (2020). Factors associated

with anxiety and quality of life of the Wuhan populace during the COVID-19 pandemic. *Stress & Health*, 37, 887–897, DOI: 10.1002/smi.3040.

52. MACKU, K., CAHA, J., PASZTO, V., TUCEK, P. (2021). Subjective or Objective? How Objective Measures Relate to Subjective Life Satisfaction in Europe. *International Journal of Geo-Information* 9, 5, 320. DOI: 10.3390/ijgi9050320.
53. MASAN, J., HAMAROVA, M. (2021). Potential Solutions to Selected Consequences of the COVID-19 Pandemic on Mental Health Relevant Also for the Post-COVID Era. *Clinical Social Work and Health Intervention,* 12(3), 9-14. DOI: 10.22359/cswhi_12_3_01.
54. MATURKANIC, P., TOMANOVA CERGETOVA, I., KRALIK, R., HLAD, L., ROUBALOVA, M., GARCIA MARTIN, J., JUDAK, V., AKIMJAK, A., PETRIKOVICOVA, L. (2022). The Phenomenon of Social and Pastoral Service in Eastern Slovakia and Northwestern Czech Republic during the COVID-19 Pandemic: Comparison of Two Selected Units of Former Czechoslovakia in the Context of the Perspective of Positive Solutions. Int. *J. Environ. Res. Public Health*, 19, art. Numb. 2480, DOI: 10.3390/ijerph19042480.
55. MATURKANIC, P., TOMANOVA CERGETOVA, I., KONECNA, THURZO, V., AKIMJAK, A., HLAD, L., ZIMNY, J., ROUBALOVA, M., KURILENKO, V., TOMAN, M., PETRIKOVIC, J., PETRIKOVICOVA, L. (2022). Well-Being in the Context of COVID-19 and Quality of Life in Czechia. Int. J. Environ. Res. *Public Health,* 19, art. Numb. 7164, DOI: 10.3390/ijerph19127164.
56. MEDVEDEV, O. N., LANDHUIS, C. E. (2018). Exploring constructs of well-being, happiness and quality of life. *PeerJ,* 6:e4903, 3–16. DOI: 10.7717/peerj.4903.
57. MELDRUM, D. R., MORRIS, M. A., GAMBONE, J. C. (2017). Obesity pandemic: causes, consequences, and solutions-but do we have the will? *FertilSteril*, 107, 833–839. DOI: 10.1016/j.fertnstert.2017.02.104.
58. MICHALOS, A. C. (2014). *Encyclopaedia of quality of life and well-being research*, 1st ed.; Springer: Dordrecht, Netherlands, pp. 7347. https://doi.org/10.1007/978-94-007-0753-5.
59. MJAALAND, M. T. (2007). *I dødens hule selv: Søren Kierkegaard om selvmord, frihet og fortvilelse*. Suicidologi 2007, 12(3), 3-7. Available on: https://www.duo.uio.no/bitstream/handle/123456789/32929/Kierkegaard_Suicidologi_3_07_MTM.pdf.
60. MORI, H. M., TAKAHASHI, M., ADACHI, M., SHINKAWA, H., HIROTA, T., NISHIMURA, T., NAKAMURA, K. (2022). The association of social capital with depression and quality of life in school-aged children. *PLoS ONE*, 17(1), 1–19. DOI: 10.1371/journal.pone.0262103.
61. MURGAS, F., PETROVIC, F. (2022). Geography of Well-Being: Czech Experience. *Geographical Journal*, 74 (2), 181–194. DOI: 10.31577/geogrcas.2022.74.2.09.
62. MURGAS, F., PETROVIC, F., MATURKANIC, P., KRALIK, R. (2022). Happiness or Quality of Life? Or Both? *Journal of Education Culture and Society*, 13(1), 17–36. DOI: 10.15503/jecs2022.1.17.36.
63. MURGAS, F., PODZIMEK, M., PETROVIC, R., TIRAKOVA, A., KRALIK, R. (2023). The impact of religiosity on quality of life. *Acta Missiologica,* 17(2). 169-186.
64. NEZIRI, A., TURKU, M., PAVLIKOVA, M. (2024). Exploring the Absurdity of War: A Literary Analysis of Catch-22. *Journal of Education Culture and Society*, 15(1), 521-532.
65. NIMH (National Institute of Mental Health) (2022) *Mental Illness*. Available on: https://www.nimh.nih.gov/health/statistics/mental-illness#part_154785.
66. OECD 2020. COVID-19 and Africa (2022) *Socio-economic implications and policy responses*. Available on: https://www.oecd.org/coronavirus/policy-responses/covid-19-and-africa-socio-economic-implications-and-policy-responses-96e1b282.
67. OHRNBERGER, J., FICHERA, E., SUTTON, M. (2017). The relationship between physical and mental health: A mediation analysis. *Social Science & Medicine*, 195, 42–49.

DOI: 10.1016/j.socscimed.2017.11.008.
68. RAVENS-SIEBERER, U., KAMAN, A., ERHART, M., DEVINE, J., SCHLACK, R., OTTO, C. (2022). *Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany*. Eur Child Adolesc Psychiatry, 31, 879–889. DOI: 10.1007/s00787-021-01726-5.
69. PAHO (Pan American Health Organisation) (2022) *Depression.* Available on: https://www.paho.org/en/topics/depression.
70. PAVLIKOVA, M., MATURKANIC, P., AKIMJAK, A., MAZUR, S., TIMOR, T. (2023). Social Interventions in the Family in the Post-COVID Pandemic Period. *Journal of Education Culture and Society,* 14(1), 106-123. https://doi.org/10.15503/jecs2023.1.106.123.
71. PAVLIKOVA, M., TAVILLA, I. (2023). Repetition as a Path to Authentic Existence in Kierkegaard's Work. *Journal of Education Culture and Society*, 14(2). 105-115.
72. PETRIKOVICOVA, L, KURILENKO, V., AKIMJAK, A., AKIMJAKOVA, B., MAJDA, P., DATELINKA, A., BIRYUKOVA, Y., HLAD, L., KONDRLA, P., MARYANOVICH, D., IPPOLITOVA, L., ROUBALOVA, M., PETRIKOVIC, J. (2022). Is the Size of the City Important for the Quality of Urban Life? Comparison of a Small and a Large City. *Sustainability*, 14, 15589. DOI: 10.3390/su142315589.
73. PETROVIC, F., MATURKANIC, P. (2022). Urban-Rural Dichotomy of Quality of Life. *Sustainability*, 14, 1–18. DOI: 10.3390/su14148658.
74. PETROVIC, F., MURGAS, F., KRALIK, R. (2023). Food, exercise and lifestyle are predictors of a hedonic or eudaimonic quality of life in university students? *Acta Missiologica*, 17(2), 99-114.
75. PETROVIC, F., MURGAS, F., KRALIK, R. (2021). Happiness in Czechia during the COVID-19 Pandemic. *Sustainability*, 13, 10826. DOI: 10.3390/su131910826. Research Methods | Definitions, Types, Examples (2019) Available on: https://www.scribbr.com/category/methodology.
76. RUGGERI, K., GARCIA-GARZON, E., MAGUIRE, A., MATZ, S., HUPPERT, F. A. (2020). Well-being is more than happiness and life satisfaction: a multidimensional analysis of 21 countries. *Health Qual Life Outcomes*, 18, 1–16. DOI: 10.1186/s12955-020-01423-y.
77. SALMANIAN, K., MARASHIAN, F. S. (2022). Prediction of Death Anxiety based on Body Image Concerns Mediated by Disease Perception in Patients with Breast Cancer. *Clinical Social Work and Health Intervention*, 13(5), 61-66. DOI: 10.22359/cswhi_13_5_12.
78. SELIGMAN, M. E. P. (2019). Annual Review of Clinical Psychology Positive Psychology: A Personal History. Annu. Rev. *Clin. Psychol,* 15, 1–23. DOI: 10.1146/annurev-clinpsy-050718-095653.
79. SIRGY, M. J. (2012). *The psychology of quality of life. Hedonic well-being, life satisfaction, and eudaimonia,* 2nd ed.; Springer: Dordrecht, Netherlands, pp. 622.
80. SKEVINGTON, S. M., BOHNKE, J. R. (2018). How is subjective well-being related to quality of life? Do we need two concepts and both measures? *SocSci Med*, 206, 22–30. DOI: 1016/j.socscimed.2018.04.005.
81. SMITH, C. E. (2014). Paradox. *In Encyclopedia of quality of life and well-being research*, Michalos A.C., Eds.; Springer: Dordrecht, Netherlands, pp. 1754–1757. DOI: 10.1007/978-94-007-0753- 5_802.
82. SUSNIENE, D., JURKAUSKAS, A. (2009). The concepts of quality of life and happiness –Correlation and differences. *Engineering Economics*, 3, 58–65.
83. SUZUKI, K., NUMAO, A., KOMAGAMINE, T., HARUYAMA, Y., KAWASAKI, A., FUNAKOSHI, K., FUJITA, H., SUZUKI, S., OKAMURA, M., SHIINA, T., HIRATA, K. (2021) Impact of the COVID-19 Pandemic on Quality of Life of Patients with Parkinson's Disease and Their Caregivers: A Single-Center Survey in Tochigi Prefecture. *J Parkinsons Dis*., 11, 1047–1056. DOI: 10.3233/JPD-212560.
84. TMD (Taber´s Medical Dictionary) (2022) *Incidence.* Available on: https://www.tabers.com/tabersonline/view/Tabers-Dictio-

nary/729742/0/incidence?q=Incidence.
85. TKACOVA, H., PAVLIKOVA, M., JENISOVA, Z., MATURKANIČ P, KRÁLIK R (2021) Social Media and Students' Wellbeing: An Empirical Analysis during the Covid-19 Pandemic. *Sustainability*, 13, 10442. DOI: 10.3390/su131810442.
86. TKACOVA, H., PAVLIKOVA, M., AZIZI, M., SOTIROFSKI, K. (2023). Oversharing of content online by children during the holidays and parental control. *Acta Missiologica*. 17(2), 60-74.
87. TUBERGEN, A, VAN GULPEN, A, LANDEWE, R., BOONEN, A. (2018). Are globals for health, well-being and quality of life interchangeable? A mixed methods study in ankylosing spondylitis patients and controls. *Rheumatology*, 57, 1555–1562. DOI: 10.1093/rheumatology/key129.
88. UNDP (United Nations Development Programme) (2022) *Human Development Reports. Human Development Index.* Available on: https://hdr.undp.org/data-center/human-development-index#/indicies/HDI.
89. VALACHOVA, K., SHCHERBIAK, I., PODPERA, R., PAVLIKOVA, M. (2024). Workload and Stress Experienced by Lawyers and Social Workers in the Working Environment. Stress Management in Social Workers. *Acta Missiologica* 18(1), 92-102.
90. VEENHOVEN, R. (2014). Quality of Life (Qol), An Overview. *In Encyclopedia of quality of life and well-being research*, Michalos A.C., Eds.; Springer: Dordrecht, Netherlands, pp. 5265–5269. DOI: 10.1007/978-94-007-0753-5¬¬_2353.
91. VEENHOVEN, R. (2000). The Four Qualities of Life: Ordering Concepts and Measures of the Good Life. *Journal of Happiness Studies*, 1, 1–39. DOI: 10.1007/978-94-007-5702-8_11.
92. VENTRIGLIO, A., TORALES, J., BHUGRA, D. (2017). Disease versus illness: What do clinicians need to know? International *Journal of Social Psychiatry*, 63, 3–4. DOI: 10.1177/0020764016658677.
93. WANG, Q., TAPIA GRANADOS, J. A. (2019). Economic growth and mental health in 21st century China. *SocSci Med,* 220, 387–395. DOI: 10.1016/ j.socscimed.2018.11.031.
94. WHO (2022). *Mental disorders.* Available on: https://www.who.int/news-room/fact-sheets/detail/mental-disorders.
95. WIDMER, M. (2014). Good Life, Theories of. *In Encyclopedia of quality of life and well-being research,* Michalos A.C., Eds.; Springer: Dordrecht, Netherlands, 2589–2592. DOI: 10.1007/978-94-007-0753-5_1183.
96. ZALEC, B., PAVLIKOVA, M. (2019). Civic virtues and functions of religion in public life. European *Journal of Science and Theology*, 15(6), 75-84.

Acknowledgements (not compulsory)

Acknowledgements should be brief, and should not include thanks to anonymous referees and editors, or effusive comments. Grant or contribution numbers may be acknowledged.

Author contributions statement

Must include all authors, identified by initials, for example: A.A. conceived the experiment(s), A.A. and B.A. conducted the experiment(s), C.A. and D.A. analysed the results. All authors reviewed the manuscript.

Additional information

To include, in this order: Accession codes (where applicable); Competing interests (mandatory statement).

The corresponding author is responsible for submitting a competing interests statement on behalf of all authors of the paper. This statement must be included in the submitted article file.

Funding: This research was funded by the Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic VEGA no. 1/0578/24

Appendix A

Questions used in the questionnaire:

-THE IMPACT OF THE PANDEMIC ON YOUR MENTAL HEALTH. Please choose one of the options: 1. Anxiety. 2. Depression. 3. Suicidal thoughts. 4. Suicide attempt. 5. No influence.

-QUALITY OF LIFE. On a scale of 0-10, indicate how the quality of your life is these days. 0 means that your quality of life is very poor, 10 means that your quality of life is excellent.

-SELF-REPORTED HEALTH (both physical and mental). Please indicate on a scale of 0-10 how healthy you currently feel. 0 means that you suffer from a life-threatening illness or the consequences of a very serious injury. 10 means you feel completely healthy.

-SOCIAL RELATIONS. Indicate what kind of social relations you have, please choose one of the options: 1 – I am alone, 2 – I have a girlfriend/boyfriend, 3 – I live with a girlfriend/boyfriend without marriage, 4 – I am married

-RELATIONSHIPS WITH NEAREST ONES BEFORE THE PANDEMIC. State on a scale of 0-10 what kind of relationships you had with your loved ones before the pandemic (girlfriend/boyfriend, parents, siblings, other people close to you). 0 means that the relations were very bad, 10 means that the relations were excellent.

-TRUST. On a scale of 0-10, rate how much you trust other people. 0 means you trust no one, 10 means you trust everyone.