ABSTRACT

Nowadays, the field of positive psychology, which focuses on the factors of positive quality of life and well-being, is becoming increasingly popular. This research makes our study relevant, in which we explore correlates of psychological and quality of life in the university student population. We highlight factors such as life satisfaction, subjective quality of psychological well-being, life purpose, peer support, self-efficacy, resilience and self-esteem. Through our questionnaire survey, we seek to find out how the coronavirus epidemic has affected the mood and emotions of university students and to explore the advantages and disadvantages of the online education experience. The questionnaire package was made available online and 228 participants (average age: 23.1) took part in the survey.

The results suggested that the transition to online education had a clear negative impact on the maintenance of relationships, leading to social isolation, and a subjective sense of emotional and mood deterioration and knowledge loss was detected by the students. In addition, the shift of education to an online platform led to a decrease in motivation and made the learning process monotonous. Based on our results, the presence of peer support, self-efficacy and psychological resilience as protective factors helped to cope with stress.

Keywords: online education, perceived stress, life satisfaction, life purpose, peer support

ÖSSZEFOGLALÓ

Napjainkban egyre népszerűbb a pozitív pszichológia irányzata, amely kiemelt figyelmet fordít a pozitív életminőség és jóllét tényezőinek vizsgálatára. Ezen kutatások teszik relevánssá vizsgálatunkat, amely során az egyetemista populáción tárjuk fel a pszichológiai és életminőséget érintő korrelátumokat. A vizsgálat során olyan tényezőket emelünk ki, mint az élettel való elégedettség, a pszichés jóllét szubjektív minősége, az életcél, a társas támasz, az énhatékonyság, a reziliencia és az önértékelés. Kérdőíves vizsgálatunkon keresztül arra keressük a választ, hogyan hatott a koronavírus járvány az egyetemisták hangulatára, érzelmeire, továbbá az online oktatás általi tapasztalatok előnyeit és hátrányait kívántuk feltárni. Az elkészített kérdőív csomagot online felületen tettük elérhetővé, a vizsgálatban 228 fő vett részt (átlagéletkor: 23,1).

Az eredmények arra engedtek következtetni, hogy az online oktatásra való áttérés egyértelműen kedvezőtlenül hatott a kapcsolatok fenntartására, ami szociális izolációhoz vezetett, továbbá érzelmi-hangulati állapot romlás és tudáscsökkenés szubjektív érzetét detektálták az egyetemisták. Ezen kívül az oktatás online platformra való áttérése motivációcsökkenéshez vezetett, és monotonná tette a tanulási folyamatot. Eredményeink alapján elmondható, hogy protektív faktorként a társas támogatás megléte, énhatékonyság és lelki rugalmasság segített a stresszel való megküzdésben.

Kulcsszavak: online oktatás, észlelt stressz, élettel való elégedettség, életcél, társas támogatás

SAŽETAK

Danas je sve popularniji trend pozitivne psihologije koja posebnu pažnju posvećuje pozitivnom kvalitetu života i blagostanja. Ova istraživanja čine našu istragu relevantnom, tokom kojeg istražujemo psihološke korelacije i korelacije kvaliteta života studenata na univerzitetu. Tokom istraživanja ističemo faktore kao što su zadovoljstvo životom, subjektivni kvalitet psihičkog blagostanja i fleksibilnosti, životni cilj, društvena podrška, samoefikasnost i samopoštovanje. Kroz našu anketu tražimo odgovor kako je epidemija korona virusa uticala na raspoloženje i emocije studenata, i želeli smo da istražimo prednosti i nedostatke iskustava kroz onlajn obrazovanje. Pripremljeni paket pitanja je postavljen onlajn, i na tim studijama je učestvovalo 228 osoba (prosečna starost: 23,1).

Rezultati su nam pokazali da je prelazak na onlajn obrazovanje negativno uticalo na održavanje odnosa, što je dovelo do socijalne izolacije i pogoršanja emocionalnog raspoloženja, i studenti su subjektivno primetili da su bili ograničeni u usvajanju znanja. Pored toga, prelazak na onlajn nastavu doveo je do smanjenja motivacije studenata i učenje je postalo monotono. Na osnovu naših rezultata, može se reći da su postojanje socijalne podrške, samoefikasnosti i psihičko fleksibilnost štiti od stresa.

Ključne reči: onlajn obrazovanje, stres, zadovoljstvo životom, životni cilj, socijalna podrška

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STUDY OF PERCEIVED STRESS AND PANDEMIC EFFECTS AMONG UNIVERSITY STUDENTS

Az észlelt stressz és a pandémia okozta hatások vizsgálata egyetemisták körében

Proučavanje percepcijskog stresa i efekata uzrokovanih pandemijom kod studenata

1. INTRODUCTION

The worldwide epidemic of coronavirus that appeared in 2019 means many sources of stress for mental health. A large number of research on crisis situations has focused on the short- and long-term consequences of stress associated with these events. At this critical situation, the absence of social support that limits an individual's basic social needs is particularly stressful, as the spread of the epidemic can be reduced by isolation. However, social support has a significant impact on mental health, and the presence of a social network also helps to cope with stress and promotes well-being and a positive quality of life (Dudok & Pikó, 2021; Pikó, 2004; Pléh, 2004). There have been many academic publications on the theories, research, models and approaches of positive psychology, which have explored the main question of what makes people happy from different perspectives (Oláh & Kapitány-Fövény, 2012). Nowadays, the field of positive psychology, which focuses on the factors of positive quality of life and well-being, is becoming increasingly popular. Taylor et al. (2020) developed a 36-item measure of stressors and anxiety symptoms of the coronavirus epidemic. On a scale of several thousand people in Canada and the US, the researchers identified 5 factors: fear of danger and infection, fear of economic consequences, xenophobia, compulsive control and self-soothing, and traumatic stress symptoms. The scales were strongly correlated with anxiety as depression. These are the basic studies that made it important to conduct this study in a university population, and these studies make our study relevant to explore the correlates of psychological and quality of life in a university population.

2. THEORETICAL BACKGROUND

Frankl (1997) believes that one must be flexible and open to the situations and values offered by life, since the search for meaning in life is guided by the pleasure principle and is not determined only by the subject but by the existence of the situation, since life expects different things from the individual in every situation and moment. However, a distinction must be made between "living life as meaningful" and "seeking meaning in life" (Martos & Konkolÿ Thege, 2012). Demetrovics and Nagy (2001) understand meaning in life as the precise goals and plans that one has set and the task-orientation that one has to achieve them. For example, happiness is not a specific goal but a consequence itself, which goes hand in hand with a meaningful life. Antonovsky sought to explain meaningfulness in life through an extensive conceptualisation, which he called a sense of coherence, which is more likely to arise when coping with stressful situations (Martos &Konkolÿ Thege, 2007). Research by Nair (2003) has linked the success of recovery from physical symptoms of patients to the individual's goals and the existence of meaningfulness in life, so meaningfulness in life is certainly an important cornerstone for psychological functioning (Martos &Konkolÿ Thege, 2012).

In addition, there is life satisfaction, which influences phenomena such as well-being, quality of life, and the level of life satisfaction, which depends primarily on the cognitive evaluation of the quality of life, according to the individual's subjective perception of the conditions (Martos et al., 2014). According to Frisch (2006), it is essential that people recognize their purpose and desires in different areas of their lives and that they are satisfied with them. He identified four essential components of this: objective circumstances, subjective attitudes and attitudes, evaluation of the extent to which the person's needs are being met, and the importance of the particular area to the individual. The sum of these factors will, according to the model, give the overall life satisfaction, i.e. that the individual's subjective well-being and happiness depends on the balance of life satisfaction and positive and negative emotions (Frisch, 2006, cited in Szondy, 2011).

In addition, it should be emphasized that humans are social beings, and that they fundamentally desire the presence of others, and to develop and maintain balanced and intimate relationships. This is why research on how individuals are influenced by their social relationships and by the presence of people important to them has become relevant. According to Kovács and Pikó (2007), people who live in isolation, have few friends and no family are more prone to somatic and mental health problems (Papp-Zipernovszky, Kékesi & Jámbori, 2017). In relation to peer support, helping attitudes can be arrived at along three main dimensions, the first being the emotional factor, where listening to one's problems and providing emotional support is important. The second dimension is the cognitive dimension, where the preservation of self-image is primary, while the instrumental, third factor is the provision of assistance in terms of money or resources for livelihood (Pikó, 2002, cited in Papp-Zipernovszky et al., 2017). Research has pointed to the immune-boosting effect of social support, as well as helping to cope with stressful situ-

ations (Lazarus, 1983), while also promoting life satisfaction. However, there is a notable gender difference, women providing and receiving a higher level of social support both emotionally and cognitively (Papp-Zipernovszky et al., 2017).

These are the factors that highlight the importance of studying university students, looking at confinement and isolation during an epidemic.

3. RESEARCH OBJECTIVE

The aim of our research is to investigate the effects of the introduction of online education among undergraduates as a result of COVID-19 and to identify psychological and quality of life characteristics in this population. We will highlight factors such as life satisfaction, subjective quality of psychological well-being, life purpose, peer support, self-efficacy, resilience and self-esteem. Through our questionnaire study, we seek to answer how the coronavirus epidemic has affected the mood and emotions of university students. In the course of our research, we prepared a questionnaire package for the students, and we also created our own questionnaire, which we also applied to the examined sample.

Based on these results, the following research questions were identified:

(Q$_1$) Is the COVID-19 self-designed questionnaire is suitable for exploring the negative effects of online education among university students?

(Q$_2$) Is perceived stress (PSS) among university students is related to the sociodemographic factors studied and to the validated questionnaire?

4. MATERIALS AND METHODS

4.1. Description of the study

Our study took place in May 2021, after the 1st and 2nd COVID-19 waves in Hungary, and as a result we made our survey questionnaire package available on an online university platform. With the help of the university, we used the Neptun and CooSpace platforms to share the online questionnaire link and published it on social media via telemetry. The examined students were selected on a voluntary access basis. At the beginning of the questionnaire, respondents were informed that their anonymity would be guaranteed when responding and that their data would be used for research purposes only. The criterion for participation in the research was the existence of an active university student status.

4.2. Sample

The online questionnaire was completed by 227 people during the IP (1 May to 31 July 2021), and all questions were compulsory, so there were no incomplete responses. Detailed data on the participants are shown in Table 1.

Table 1: *Demographic data on participants (N=227)*

Demographic characteristics of the sample		Sample (N=227)
	Male	N=34
	Female	N=193
Average age (Mean)		23,1 years (SD=5,192 years)
	Male	22,9 years (SD=4,078 years)
	Female	23,03 years (SD=5,372 years)
Type of residence (%)	Capital	4,8 (N=11)
	City	73,2 (N=167)
	Village	21,1 (N=48)
	Other	0,9 (N=2)
Study timetable (%)	Full-time	87,3 (N=199)
	Part-time	12,7 (N=29)
Type of Cohabitation (%)	Family of origin (parent, sibling(s))	65,4 (N=149)
	In a relationship with a partner	18,9 (N=43)
	Alone	5,3 (N=12)
	With friends	0,9 (N=2)
	With own family (husband, child(ren))	2,2 (N=5)
	With roommate	6,6 (N=15)
	Other	0,9 (N=2)
Work while studying (%)	Yes	51,8 (N=118)
	No	48,2 (N=110)

4.3. Test tools

In the first part of the questionnaire package we asked for demographic data, and in the next part of the questionnaire battery we took validated questionnaires. The questionnaires were: **University students at the time of the coronavirus (COVID-19 questionnaire)**. The questionnaire asked students multiple-choice questions, and we tried to keep the answers consistent, so we mainly used a closed questionnaire where respondents were given the opportunity to write in their own answers. We wanted to explore the emotional, mood, insecurity, economic and relationship impacts of the COVID-19 epidemic by means of a self-administered questionnaire. The aim of the questionnaire was not only to make contact and establish contact, but also to allow students to express their views on the situation and to measure and investigate the negative and positive effects of COVID-19 among students. In the questionnaire we constructed, there are 3 major groups of questions, the first block of questions asks about the emotional-emotional, social and financial changes of the epidemic of the coronavirus, which contains 39 statements (e.g. Compared to the previous epidemic situation, I now feel more suspicious and distrustful of everyone). The second block of questions asks about the possible benefits of distance learning in the form of 10 statements (e.g. I could prepare more flexibly at my own pace. It was safer from an epidemiological point of view.) The last group of questions aimed to explore the disadvantages of non-present education by 10 statements (e.g. I felt that the disadvantage of distance education was that group and project work was difficult to implement. I became unmotivated because of non-attendance.) Responses were rated by respondents according to how true they felt they were for themselves on a 4-point Likert scale (1 = not true at all, 2 = slightly true, 3 = true, 4 = completely true).

Our research is based on a positive psychology approach, looking at the relationship between pandemic stress, life satisfaction, peer support and life goals.

Purpose of Life Questionnaire (PIL): a procedure for measuring subjective goals that determine the meaning of an individual's life, the Purpose of Life Test (PIL), was developed in America by Crumbaugh & Maholick (1964) The questionnaire consists of 20 items, and for each item the respondent is asked to indicate the self-rated value of the statement on a 7-point scale. Each item has a different meaning for each score, there is no fixed meaning. In each case, the score is the sum of the numbers indicated by the respondent. (Konkolÿ & Martos, 2006). **Satisfaction with Life Scale (SWLS-H)**: A questionnaire was developed to provide a psychometrically reliable measure of satisfaction with life, consisting of five positive statements, with the respondent rating agreement on a seven-point scale. In summary, the sum of the scores for each response gives the final score on the scale. A high score indicates high satisfaction with life. (Martos et al, 2014). **Self-efficacy questionnaire**: General self-efficacy measures a person's stable personal competence. The Efficacy Questionnaire measures the person's stable personal competence, aimed at helping the individual to deal effectively with various stressful situations (Schwarzer, 1999). Low feelings of self-efficacy are associated with depression, anxiety and feelings of helplessness, whereas individuals with high self-efficacy set higher goals, act more thought-

fully and exert more effort (Kopp, Schwarzer and Jerusalem, 1993). **WHO Well-being Questionnaire**: the shortened Hungarian 5-item questionnaire provides information on the general well-being of the respondent during the last two weeks, the higher the score, the more positive the person feels about his/her psychological well-being (Susánszky et al, 2006). **Rosenberg Self-Evaluation Scale (RSES-H)**: The level of self-evaluation is an independent predictor of life satisfaction, and the Hungarian 10-item self-report questionnaire was used to measure global self-evaluation, where the higher the mean score, the higher the self-evaluation of the individual (Sallay et al., 2014). **Social Support Questionnaire (MOS SSS)**: The 3 dimensions of the questionnaire include items measuring emotional-informational support, support based on positive social interaction and instrumental support. The instrument explores the extent and forms of an individual's social support, the higher the score, the stronger the individual's experience of social support either globally or along each dimension (Sz. Makó et al., 2016). **Connor-Davidson Resilience Questionnaire**: Resilience is a protective factor that helps individuals to mitigate the negative effects of stress and enables more adaptive coping in difficult life situations. To measure successful adaptation to critical life situations and psychological resilience, the abbreviated 10-item unidimensional questionnaire was used (Járai et al., 2015). **Perceived Stress Questionnaire (PSS)** identifies subjectively rated stressful situations experienced in the past month, how overwhelmed and unpredictable the individual feels in his/her day. The questionnaire measures changes in stress levels (coping thoughts, health status) with 14 items on a 5-point Likert scale (Stauder &Konkolÿ -Thege, 2006).

5. RESULTS

To investigate COVID-19 effects, we asked lay people for their opinions and recollections of their personal experiences. Thus, we collected a number of formulations in the form of statements, grouped similar ones together and filtered out 41 items that we felt were sufficient. Responses were rated according to how true they felt they were to themselves on a 4-point Likert scale. The last two questions asked about the advantages and disadvantages of online education.

In the next step, an exploratory factor analysis was conducted on the basis of the data obtained in order to create fewer factors from more variables and to explore the relationship and structure between the variables. To determine whether the selected variables were suitable for factor analysis, we examined the KMO value. The Kaiser-Meyer-Olkin value was found to be greater than 0.6, so the model was reliable and suitable for factor analysis. The KMO value indicates that the model is reliable and suitable for factor analysis (KMO=0.867, Bartlett's test value $\chi^2(741)$=4116.724, p< 0.001).

Based on the results, 10 factors were isolated, explaining 65.364% of the variance of the 39 items. Figure 1 shows the mean scores and variances of the 10 factors of the COVID-19 questionnaire. The most prominent stressors are: factor 2: knowledge and skill deteriora-

tion (*M*=2.88; *SD*=0.73), factor 4: possibility of introversion (*M*=2.4; *SD*=0.62), factor 5: negative effects of isolation (*M*=2.4; *SD*=0.89), factor 6: possibility of getting a good result (*M*=2.45; *SD*=0.97) was scored higher by students in sub-factors.
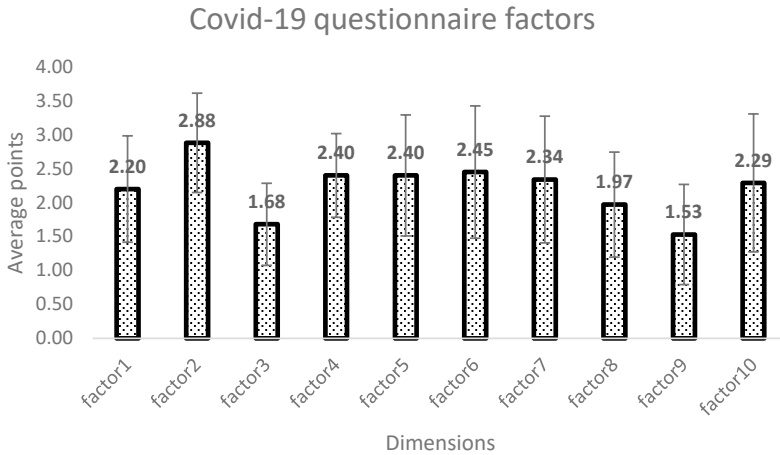

Figure 1: *Mean scores and standard deviations of the 10 factors of the COVID-19 questionnaire*

The sub-factors were named as follows: factor 1: emotional and mood deterioration due to COVID-19, factor 2: knowledge and skills deterioration, factor 3: financial problems due to the pandemic, factor 4: perceived possibility of turning inward, factor 5: negative effects of isolation, factor 6: possibility of getting a good result, factor 7: loss of motivation to learn, factor 8: feeling left alone, factor 9: fear of infection, factor 10: more accepting teachers.

Based on the results obtained, we found significant differences in the mean scores of males and females in sub-factor 5: negative effects of isolation (t(225)= -2.561, p=0.011) and factor 6: opportunity to get good results (t(225)= -3.317, p=0.001) (Table 2).

Table 2: *Mean and standard deviation of COVID-19 questionnaire factors by gender*

COVID-19 questionnaire factors	Male (N=34)		Female (N=194)		t-test
	Average	**Standard deviation**	**Average**	**Standard deviation**	
factor 1	2,24	0,758	2,2	0,786	(t(225)=0,296, p=0,767)
factor 2	2,72	0,675	2,92	0,738	(t(225)=-1,475, p=0,142)
factor 3	1,52	0,497	1,71	0,618	(t(225)=-1,653, p=0,1)
factor 4	2,3	0,405	2,42	0,645	(t(66,882)=-1,385, p=0,171)
factor 5	2,08	0,865	2,5	0,88	(t(225)=-2,561, p=0,011)
factor 6	1,65	0,847	2,54	0,97	(t(225)=-3,317, p=0,001)
factor 7	2,42	0,93	2,33	0,935	(t(225)=0,561, p=0,575)
factor 8	2,04	0,835	1,96	0,764	(t(225)=0,524, p=0,601)
factor 9	1,48	0,8	1,54	0,72	(t(225)=-0,409, p=0,683)
factor 10	2,23	0,955	2.3	1,03	(t(225)=-0,372, p=0,71)

In Table 3., we present which factors were highlighted during the online education, among which the students could indicate how much they agreed with them. The table also shows their frequencies, those elements that indicate an occurrence rate of over 50% have been highlighted in gray, i.e. the respondents feel that these factors were an advantage during online education. This shows that for the sample as a whole, there are four distinct advantages of online education: it was considered a safer option from an epidemiological point of view by 73.1% of the sample, and was rated as cost-effective by 66.1%, as well as more flexible, self-paced lesson preparation by 54.6%, and the benefit of retrievable, more modern teaching materials was highlighted by 52.9%.

Table 3: *Benefits of online education according to university students (N=227)*

Advantages of online education	Male	Female	Total	Average
	N = 34	**N = 193**	**N = 227**	**%**
1. no advantage of online education	0	7	7	3,1
2. easier to complete	27	79	106	46,7
3. safer from an epidemiological point of view	25	141	166	73,1
4. more efficient time management	19	83	102	44,9
5. more modern learning materials (viewable, accessible)	21	99	120	52,9
6. self-paced, more flexible preparation for lessons	24	100	124	54,6
7. improved independent learning skills	9	55	64	28,2
8. cost-effective	26	124	150	66,1
9. better concentration on online lessons	4	10	14	6,2
10. comfort of home environment was more ideal	21	81	102	44,9

Furthermore, we asked the respondents to comment on the disadvantages of online education and what they experienced. Table 4 shows the frequency of marking each factor by gender and in aggregate. The research shows that in the university population, more disadvantages were reported by the respondents during the online education, these relevant negative effects above 50% are also marked in Table 4. 98.1% clearly found online education to have a disadvantage, 84.6% found lack of social connections and difficulties in connecting to others to be prominent. In addition, 73.1% of respondents felt that they had clearly become unmotivated and 66.1% felt that this type of education was monotonous. 64.8% highlighted the difficulty of internships, work placements, training and seminars, and 63.4% stressed the difficulty of working in a group and solving tasks.

Table 4: *Disadvantages of online education according to university students (N=227)*

Disadvantages of online education	Male	Female	Total	Average
	N = 34	**N = 193**	**N = 227**	**%**
1. there are disadvantages	31	192	223	98,2
2. lack of social contacts, relationship difficulties	24	168	192	84,6
3. difficult to implement group work	19	125	144	63,4
4. lack of motivation	23	143	166	73,1
5. monotony	23	127	150	66,1
6. difficult access to learning material	5	40	45	19,8
7. internship, visiting, training, work experience cannot be organised in this way	15	132	147	64,8
8. possibility of cheating	14	77	91	40,1
9. instructor's technical and other lack of preparation	15	79	94	41,4
10. lack of own IT skills	0	24	24	10,6
11. loss of quality	12	62	74	32,6
12. poor quality/lack of lessons	16	79	95	41,9
13. inflexible instructor attitude	11	54	65	28,6

We examined the association of the validated questionnaires with some of the advantages and disadvantages of online education, the relationships and their values are presented in Table 5.

Table 5: Correlation of validated questionnaires with some advantages and disadvantages of online education

Validated questionnaires	Advantages and disadvantages of online education	r(225)	signifi-cance (p)	Association
Perceived stress level	Unmotivated	0.294	< 0.00	weak positive
Perceived stress level	Poor quality, missed classes	0.229	=0.001	weak positive
Self-efficacy	The development of independent learning skills	0.21	=0.001	weak, negligible, but positive
WHO psychological well-being	The development of self-study skills	0.213	=0.001	positive but very weak
WHO psychological well-being	Demotivation	-0.227	=0.001	inverse weak
WHO psychological well-being	Instructor's technical and other lack of preparation	-0.22	=0.001	weak, negative
WHO psychological well-being	The decline in the quality of instruction	-0.215	=0.001	weak, negative
WHO psychological well-being	Ooor quality of lessons	-0.205	0.001	weak, negative
WHO psychological well-being	Life satisfaction	0.49	< 0.001	positive strong

Thus, individuals who rated their psychological well-being positively felt that their self-learning skills had improved and they were more satisfied with their lives during on-line education. Furthermore, those who felt negative about their psychosocial well-being became unmotivated, felt that the instructor was unprepared, the quality of the instruction was reduced and experienced the lessons as poor quality.

To investigate the combined effect of sociodemographic, psychosocial, intrapsychic factors on stress, a stepwise multiple linear regression model was constructed to to answer our 2nd research question by considering the dependent variable as independent variables. The present analysis is presented in Table 6, where the dependent variable was the total perceived stress score and the independent variables were the factors resulting from the questions asked during the data collection. Using the backward method of linear regression,

the independent variables remaining in the model were: cohabitation, psychological well-being (WHO), life purpose (PIL), resilience, self-esteem and factors 1, 2, 3, 8 of the COVID questionnaire (emotional-mood deterioration, knowledge and skill deterioration, financial problems, abandonment). The regression model shows a significant linear relationship between the dependent (PSS - perceived stress score) and independent variables ($F(9, 217)=$ 46.004, $p < 0.001$). Together, the independent variables explain 65.5% of the prevalence of perceived stress in the sample ($R^2 = 0.656$, and 64.2% $R_{Adj}^2 = 0.642$ in the population).

The independent variables that had a significant effect on the amount of perceived stress were those with $p < 0.05$. The strongest effect on the occurrence of stress was the deterioration in emotional-mood state during COVID-19, followed by life goals. There was a negative significant effect on the person's subjective psychological well-being, followed by self-esteem, resilience and who the person lives with in the household.

There was a positive effect, non-significant but with a trending relationship between perceived stress and deterioration in knowledge, skills and financial problems, and a negative trending relationship with feelings of abandonment.

The higher level of stress was influenced by the person's stable life goals, perhaps the person felt that these life goals were under threat and that there were obstacles to achieving them in the current situation. It is not surprising, however, that a deterioration in the emotional state of the person's life would lead to an increase in the person's stress level. However, it appears that stress levels were reduced if the person had higher self-esteem, a higher level of resilience, subjectively rated mental well-being, or if they did not live alone.

Table 6: *Beta coefficients and significance levels*

Independent variables	β coefficient	Significance	t-value
coexistence	-0,098	0,016	-2,43
psychological well-being (WHO)	-0,295	0,000	-5,443
life purpose (PIL)	0,21	0,003	3,021
Resilience	-0,199	0,003	-3,016
Rosenberg	-0,28	0,000	-4,332
factor 1: Deterioration of emotional-mood state	0,35	0,000	4,703
factor 2: Deterioration of knowledge and skills	0,078	0,09	1,705
faktor 3: Financial problems	0,074	0,081	1,753
faktor 8: Feeling of abandonment	-0,081	0,094	-1,681

Based on the results of our correlational analysis, we found (Table 7) that the positive, emotional and instrumental dimensions of social support showed a positive correlation with psychological well-being, life satisfaction, self-efficacy and resilience levels, and a weak negative correlation with perceived stress. However, deterioration in emotional-mood state was associated with higher stress scores and negatively correlated with positive correlates. In other words, students who felt less of a deterioration in their emotional-mood state had higher subjectively perceived psychological well-being, higher self-efficacy and resilience.

Table 7: *Results of the correlation analysis*

	Stress	WHO	SWLS-H	Self-Éfficiency	Resilience
Emotional support	-0,358	0,419	0,564	0,388	0,412
Positive support	-0,265	0,351	0,523	0,331	0,342
Instrumental support	-0,242	0,275	0,476	0,34	0,308
factor 1: Deterioration of emotional and mood state	0,711	-0,66	-0,594	-0,507	-0,598
factor 2: Deterioration of knowledge, skills	0,353	-0,247	-	-0,221	-0,251
factor 3: Financial problems	0,296	-	-0,295	-0,211	-
factor 4: Possibility of turning inward	0,286	-0,29	-	-0,226	-0,242
factor 5: Negative effects of isolation	0,369	-0,288	-0,247	-0,29	-0,272
factor 6: Opportunity to get a good result	-	-	-	-	-
factor 7: Loss of motivation to learn	0,366	-0,288	-0,346	-0,238	-0,397

factor 8: Loneliness	0,36	-0,376	-0,42	-0,349	-0,357
factor 9: Fear of the virus	-	-	-	-	-
factor 10: Accepting teachers	-	-0,283	-	-	-0,213

(all cases p < 0.001, p=0.001)
(in all cases r(225)=)

7. DISCUSSION

At the beginning of our research, we asked if the COVID-19 self-designed question-naire is suitable for exploring the negative effects of online education among university students? We also asked whether if perceived stress (PSS) among university students is related to the sociodemographic factors studied and to the validated questionnaire?

Our research was the first to use a self-administered questionnaire to investigate the advantages and disadvantages of distance learning and to explore the changes in emo-tional and mood state, social relationships and financial situation caused by the outbreak of the coronavirus. In addition, a validated questionnaire was used to conduct a corre-lation analysis on the target population. Our research was conducted during pandemic, global public health epidemic with the aim of investigating university students' individual life goals, self-evaluation, and adaptive mental resilience in stressful situations, and to explore the advantages and disadvantages of online education. After nearly a year of on-line distance learning experience following the 3rd wave of the pandemic in Hungary, university students reported that the stressors were deterioration of knowledge and skills and negative effects of social isolation, but also that the coronavirus pandemic created opportunities for introversion and favoured better academic grades. The move to online education has provided students with a secure solution to the spread of the epidemic, as well as flexible, cost-effective and revisable course materials. However, they also reported marked negative effects, in particular a loss of social contact, a lack of motivation and a monotonous perception of education. In addition, there were deficits in the feasibility of internships, training, visitings and group work.

After the examination, it can be said that, the existence of social resources and peer support emerged as a protective factor in coping with stress for the university student population studied. Individuals who were less satisfied with their lives and who had low self-efficacy and resilience levels, reduced psychological well-being, emotional and mood deterioration, reduced knowledge and skills, abandonment and lack of motivation were

the most common characteristics. Lack of motivation, poor quality or missed lessons contributed to increased stress levels. However, improvements in independent learning skills contributed to psychological well-being and increased self-efficacy.

According to Vázquez et al. (2015), the level of life satisfaction is negatively affected by physical and mental illness (cited in Martos et al., 2014). Going further, Frisch (2006) argues that the model of overall life satisfaction includes the subjective attitude of the individual in addition to objective circumstances (cited in Szondy, 2011). Based on this model, our research examined one factor from this approach, so it is worth exploring the health status of the individual based on objective indicators as well.

The coronavirus epidemic markedly affected the somatic, social and psychological state of the individual, all of which may have an impact on our results. Therefore, it is not sufficient to capture and understand the impact of just a few factors on a person's life satisfaction and psychological well-being.

One limitation of our research is the self-report questionnaire, which is difficult to control. Furthermore, the convenience sampling of the online form relatively limited the number of respondents who used the internet and had a higher proportion of women compared to the overall population. Of course, the psychological state of the individual during the completion of the questionnaire, the mood in which the questionnaire was completed, and whether there were distractions in the environment, or even interruptions, may also be an interesting determinant that could bias the results. These are all factors that can manipulate the results of the survey.

There is a place for research exploring psychological wellbeing, mental state, observing more closely the emotional response, the impact on behaviour and emotional and mood state, coping, social relationships of the emerging pandemic and its effects. Based on these results, it can be concluded that the COVID-19 self-designed questionnaire is suitable for exploring the negative effects of online education among university students, it has also been possible to identify factors that are related to perceived stress.

Emerging global, paranormal crises (climate crisis, war, energy emergencies, drastic inflation, chaos in education) are risk factors that have a profound impact on the psychological well-being of the individual. As the possibility of a similar pandemic in the future cannot be ruled out, the experience of the last few years is of paramount importance, as it can help us to make a special effort to preserve the mental health of the university population, while improving technical conditions.

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