



Depressive Disorders of Polish University Students During the Covid-19 Pandemic

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Abstract: The aim of the study was to determine the symptoms of depressive disorders manifested by 151 students—138 (91.4%) women and 13 (8.6%) men—studying at Polish universities after a year of the pandemic caused by the SARS-CoV-2 (Covid-19) virus in the country. The study used a depression test by David D. Burns, consisting of 25 questions (described states), in which students had the opportunity to choose one of four answers, to which appropriate points were assigned: 0: not at all; 1: rarely; 2: sometimes; 3: often; 4: very often. 151 students from randomly selected universities located in the central, northern, and southern parts of Poland participated in the study. The study, recognised as a pilot study, was conducted from May to September 2021. At the time of the study, only half of the students were vaccinated against the COVID-19 virus. The statistical analysis of test results was performed using Statistica 13.1 Dell Inc. software.

Research results: The conducted research shows that the dominant symptoms of depressive disorders often manifested by students were: a sense of discouragement (33.8%), a sense of fatigue (33.2%), loss of motivation to act (27.8%), spending less time with family and friends (27.8%), sleep problems (26.5%), a poorer mood (25.8%), and difficulty making decisions (25.2%). On the other hand, very common symptoms of depressive disorders indicated by students were: feeling of exhaustion (34.4%), sleep problems (21.2%), loss of motivation to act (17.9%), feeling of discouragement (13.9%), problems with making decisions (13.2%), loneliness (13.9%), lack of interest in work and current tasks or actions (13.2%), feeling sad and depressed (11.9%), and worrying about their own health (11.3%). Based on these results, suggestions will be made within the scope of supporting well-being.

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Introduction

Depressive disorders indicate a mental illness that combines various cognitive functions and emotional, and physical symptoms, including anhedonia, feelings of emptiness, hopelessness, and sleep disorders (American Psychiatric Association, 2013). When analyzing this disease in a broad sense, it should be pointed out that the symptoms of depression are associated with social disorders of the individual, his/her functioning in many areas, e.g., at work, school, and family (Bertha & Balazs, 2013). When reviewing many research studies, it is not easy to state unequivocally the main cause of depressive disorders, which in most cases lead to suicide attempts. Nevertheless, the assumption that symptoms of depression are significantly correlated with suicidal thoughts can be confirmed by many researchers (Ang, Wahab et al., 2019, pp. 404–410; Sarmiento-Hernández,

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Camarena-Medellín, et al., 2019, pp. 1-6).

The pandemic situation caused by the SARS-CoV-2 virus, which first appeared in Wuhan, China, on December 31, 2019, adversely affected the lives and functioning of almost every person in the world. In February 2020, the World Health Organization (WHO) defined the new coronavirus disease as COVID-19; the disease itself began to spread extremely quickly, because, already on March 11, 2020, it was noted to be present in 114 countries. On this day, COVID-19 was declared a pandemic (Hossain & Sultana & Purohit, 2020). Today, in retrospect, it can be said that the pandemic situation caused by the COVID-19 virus has led to the deaths of over 20 million people around the world and to many problems regarding human psycho-physical and social functioning. The restrictions introduced in most of the countries, Poland included, had an unfavourable impact, e.g., social distancing, isolation of sick people, quarantine, and public health policies aimed at preventing the spread of the COVID-19 virus. Research indicates that the quarantine may be a catalyst for mental health problems in people who did not have any mental disorders before. Many of them reported the appearance of the problems that may manifest as symptoms: irritability, insomnia, anxiety, depressed mood, panic disorder, somatization anxiety, anhedonia, hopelessness, frustration, loneliness (Hawryluck & Gold & Robinson, et al., 2004; Sokół-Szawłowska, 2021), depression, post-traumatic stress disorder (PTSD), and many others (Giorgi & Lecca & Alessio & Finstad et al., 2020). In some countries, there is even talk of a mental health crisis that requires systemic action in the field of mental health policy (Ding & Xu & Huang & Li & Lu & Xie, 2020; Dong & Bouey, 2020; Talevi & Socci & Carai and others, 2020).

The impact of the COVID-19 pandemic on mental health was also noted among students. Research indicates that the nationwide closures of universities (suspension of education) and the transition to e-learning have affected almost 70 percent of the world's student population (UNESCO, 2020). It was also noted that students under high academic pressure and social isolation are vulnerable to all kinds of mental health disorders (Bruffaerts et al., 2018; Mikolajczyk et al., 2008).

According to the research results cited, almost every person has suffered from the pandemic situation that the world has been experiencing. Therefore, it is necessary to take various actions aimed at preventing mental health disorders. In order to care for psychophysical well-being, it is advisable to strengthen and extract protective factors that compensate for or reduce the impact of risk factors, thus contributing to reducing the likelihood of disorders (problem behaviours) or minimising their severity.

Method

The aim of the study was to determine the symptoms of depressive disorders manifested by students studying at Polish universities, after a year of the pandemic caused by the SARS-CoV-2 (Covid-19) virus in the country. Within such a general objective, two research problems were posed:

1. After a year of the Covid-19 virus-caused pandemic in the nation, what signs of depressive disorders do students exhibit, and which ones do they exhibit the most frequently?
2. Are such variables as age, form of study, field of study, and place of residence significant for depressive disorders manifested by students?

The study used a depression test by David D. Burns, consisting of 25 questions (describing states of emotion), in which students had the opportunity to choose one of four possible options, to which appropriate points were assigned: 0 - not at all, 1 - rarely, 2 - sometimes; 3 - often, 4 - very often. The students were instructed to check the box that corresponds to the intensity and quality of the symptom over the last week, including the day on which the research tool was

completed. The study was conducted from May to September 2021 and was thought of as a pilot study. At the time of the study, only half of the students were vaccinated against the COVID-19 virus.

The study involved 151 students from selected universities located in the central (Mazovian Province), northern (Warmia-and-Masurian Province), and southern (Sub-Carpathian Province, Silesian Province, Lesser Poland Province) parts of Poland. Due to the ongoing pandemic caused by the COVID-19 virus in the country, the study was conducted using the platform and online tools; the Burns depression test was introduced into the system, and then the link to the test was sent to students of those universities with which the research author cooperated. Following that, the students were informed about the purpose of the research and its anonymity. Only those students who expressed their voluntary willingness to participate in the research participated in the study. They were informed that the research results would be published, - all respondents agreed to this.

There were 138 (91.4%) women and 13 (8.6%) men among the students taking part in the research. The age of the students was classified into different groups: 20 - 25 years - 74 (49%); 26 - 30 years - 16 (10.6%); 31 - 35 years - 25 (16.6%); 36 - 40 years - 15 (9.9%); 41 - 45 years - 12 (7.9%); over 45 years old 9 (6%). The respondents included both full-time - 105 students, (69.5%) and part-time - 46 students, (30.5%), living in the city - 68 people, (45%), and in rural areas - 83 people, (55%). The respondents were students of the following faculties: pedagogy - 104 people, (68.9%), and social work - 47 people, (31.1%).

The statistical analysis of test results was performed using Statistica 13.1 Dell Inc. software. The results of the analysis were presented in the form of frequency tables or crossover tables. An initial descriptive analysis of the variables was carried out, and the normality of the distribution of the presented variables was checked using the Kolmogorow-Smirnov (K-S) test. The descriptive analysis included the minimum arithmetic mean, median (Me), minimum and maximum values of the response range, and measures of variability such as standard deviation (SD) and quarter deviation (QD). Then, non-parametric tests were used, such as Pearson's chi-square test (χ^2) and the Kruskal-Wallis test (K-W) appropriate for qualitative variables. When verifying all the analyses, the significance coefficient p at the level of $\alpha=0.05$ was used, which made it possible to consider variables statistically significant at $p<0.05$.

Results

Statistical analysis of the research results indicated various symptoms of depressive disorders manifested by Polish students. The data obtained using the David D. Burns depression test are presented in Tables 1-5, while in Graph 1 the symptoms of depressive disorders that occurred in students often and very often are presented.

Table 1. Symptoms Of Depressive Disorders Manifested By Students Of Selected Polish Universities - Based On The David D. Burns Depression Test

Questions asked	Not at all - 0		Seldom - 1		Sometimes - 2		Often - 3		Very often - 4	
	N	%	N	%	N	%	N	%	N	%
Feeling sad/depressed	7	4,6	38	25,2	56	37,1	32	21,2	18	11,9
Worse mood	8	5,3	26	17,2	64	42,4	39	25,8	14	9,3
Crying fits or tearfulness	51	33,8	46	30,5	25	16,5	21	13,9	8	5,3
Feeling discouraged	13	8,6	19	12,6	47	31,1	51	33,8	21	13,9
Feeling hopeless	36	23,8	34	22,5	43	28,5	26	17,3	12	7,9

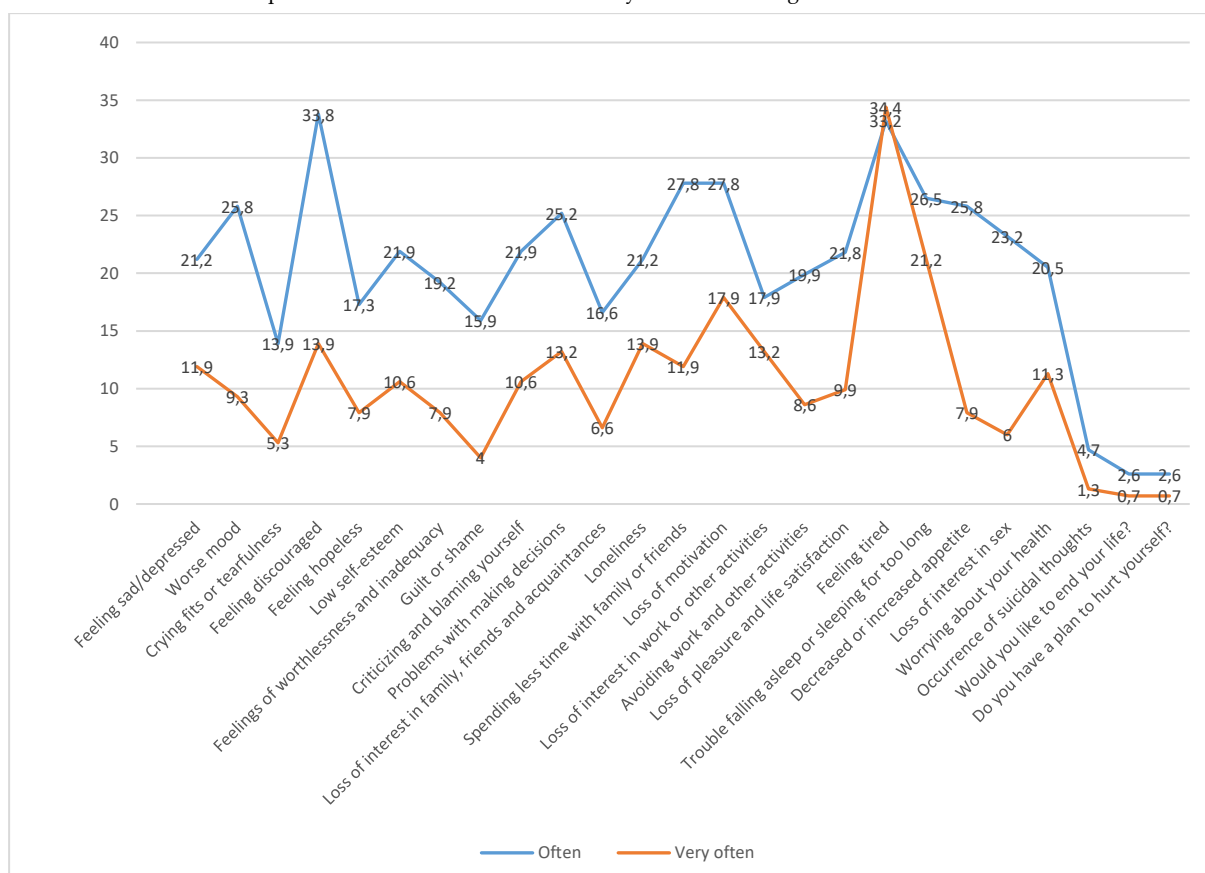
Low self-esteem	29	19,2	36	23,8	37	24,5	33	21,9	16	10,6
Feelings of worthlessness and inadequacy	46	30,5	34	22,5	30	19,9	29	19,2	12	7,9
Guilt or shame	48	31,8	44	29,1	29	19,2	24	15,9	6	4
Criticizing and blaming yourself	36	23,8	29	19,2	37	24,5	33	21,9	16	10,6
Problems with making decisions	19	12,6	34	22,5	40	26,5	38	25,2	20	13,2
Loss of interest in family, friends and acquaintances	63	41,7	28	18,5	25	16,6	25	16,6	10	6,6
Loneliness	41	27,2	24	15,9	33	21,8	32	21,2	21	13,9
Spending less time with family or friends	42	27,8	16	10,6	33	21,9	42	27,8	18	11,9
Loss of motivation	14	9,3	21	13,9	47	31,1	42	27,8	27	17,9
Loss of interest in work or other activities	21	13,9	39	25,8	44	29,2	27	17,9	20	13,2
Avoiding work and other activities	35	23,1	40	26,5	33	21,9	30	19,9	13	8,6
Loss of pleasure and life satisfaction	35	23,2	33	21,9	35	23,2	33	21,8	15	9,9
Feeling tired	6	4	12	7,9	31	20,5	50	33,2	52	34,4
Trouble falling asleep or sleeping for too long	20	13,2	18	11,9	41	27,2	40	26,5	32	21,2
Decreased or increased appetite	22	14,6	36	23,8	42	27,9	39	25,8	12	7,9
Loss of interest in sex	46	30,5	29	19,2	32	21,1	35	23,2	9	6
Worrying about your health	23	15,2	36	23,9	44	29,1	31	20,5	17	11,3
Occurrence of suicidal thoughts	109	72,2	18	11,9	15	9,9	7	4,7	2	1,3
Would you like to end your life?	113	74,8	21	13,9	12	8	4	2,6	1	0,7
Do you have a plan to hurt yourself?	125	82,8	18	11,9	3	2	4	2,6	1	0,7

Source: Own elaboration based on the research results.

The data contained in Graph 1 and Table 1 show that the dominant symptoms of depressive disorders often manifested by students were: a sense of discouragement (33.8%), a sense of fatigue (33.2%), loss of motivation to act (27.8%) %, spending less time with family and friends (27.8%), sleep problems (26.5%), poorer mood (25.8%), and difficulty making decisions (25.2%). On the other hand, as very common symptoms of depressive disorders indicated by students were: feeling of fatigue (34.4%), sleep problems (21.2%), loss of motivation to act (17.9%), feeling of discouragement (13, 9%), problems with making decisions (13.2%), loneliness (13.9%), lack of interest in work and current tasks/actions (13.2%), feeling sad and depressed (11.9%) and worrying about their own health (11.3%).

The symptoms of depressive disorders manifested by students were analyzed in the study due to such variables as: age, form of study, field of study and place of residence of the respondents. The data are presented in Tables 2, 3, 4, 5.

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Graph 1. Symptoms Of Depressive Disorders Manifested By Students Often And Very Often
 Source: Own Study Based On Conducted Research.

The data contained in Table 2 shows that the variable of students' age is significant for manifested depressive disorders. The most significant significance was noted for loss of interest in sex ($p = 0.0001$) and for the "how to hurt yourself?" option ($p=0.0951$).

Table 2. The Age Of The Surveyed Students And Their Symptoms Of Depressive Disorders

Question	Aver.	Me	Aver.	Me	Aver..	Me	Aver.	Me	Aver..	Me	Aver.	Me	P
Age	20-25 of age	years	26-30 of age	years	31-35 of age	years	36-41 of age	years	of	41-45 of age	years	over 45 years of	
Feeling sad/depressed	3,16 (1,06)	3,0 (2,0)	2,94 (1,18)	2,5 (1,5)	3,16 (0,94)	3,0 (1,0)	3,00 (1,70)	3,0 (1,0)	3,00 (1,35)	3,0 (2,0)	3,11 (0,93)	3,0 (2,0)	0,9027
Worse mood	3,14 (1,0)	3,0 (1,0)	3,25 (1,0)	3,0 (1,5)	3,16 (0,85)	3,0 (1,0)	3,20 (1,15)	3,0 (2,0)	3,33 (1,23)	3,5 (1,5)	3,00 (1,0)	3,0 (1,0)	0,9778
Crying fits or tearfulness	2,34 (1,23)	2,0 (2,0)	2,06 (1,24)	2,0 (2,0)	2,04 (1,06)	2,0 (2,0)	2,47 (1,51)	2,0 (3,0)	2,58 (1,31)	2,5 (2,0)	1,89 (0,78)	2,0 (1,0)	0,7036
Feeling discouraged	3,51 (1,14)	4,0 (1,0)	3,50 (0,97)	4,0 (1,0)	2,92 (0,34)	3,0 (2,0)	3,27 (1,10)	3,0 (1,0)	3,08 (1,38)	4,0 (2,0)	2,89 (1,05)	3,0 (0,0)	0,1164
Feeling hopeless	2,68 (1,22)	3,0 (1,0)	2,56 (1,46)	2,0 (3,0)	2,48 (1,16)	2,0 (1,0)	2,67 (1,45)	2,0 (3,0)	2,75 (1,42)	3,0 (3,0)	2,56 (0,88)	3,0 (1,0)	0,9838
Low self-esteem	2,89 (1,28)	3,0 (2,0)	2,81 (1,22)	2,5 (2,0)	2,52 (1,26)	2,0 (1,0)	3,20 (1,37)	3,0 (2,0)	2,92 (1,44)	3,5 (2,5)	2,11 (0,78)	2,0 (1,0)	0,3198
Feelings of worthlessness and inadequacy	2,45 (1,27)	2,0 (2,0)	2,44 (1,46)	2,0 (2,5)	2,32 (1,22)	2,0 (2,0)	3,00 (1,51)	3,0 (2,0)	3,00 (1,60)	3,5 (3,0)	2,33 (0,87)	2,0 (1,0)	0,5808
Guilt or shame	2,32 (1,17)	2,0 (2,0)	1,88 (1,02)	2,0 (1,0)	2,24 (1,13)	2,0 (2,0)	2,93 (1,33)	3,0 (1,51)	2,50 (1,38)	2,5 (2,5)	1,89 (1,05)	2,0 (1,0)	0,2180
Criticizing and blaming yourself	2,88 (1,25)	3,0 (2,0)	2,69 (1,40)	2,5 (2,5)	2,68 (1,44)	2,0 (3,0)	2,87 (1,51)	3,0 (3,0)	2,75 (1,36)	3,0 (2,5)	2,00 (1,12)	2,0 (2,0)	0,5736
Problems with making	3,26	3,0	2,69	3,0	2,84	3,0	3,00	3,0	3,08	3,0	2,44	2,0	0,3016

decisions	(1,22)	(2,0)	(1,25)	(2,5)	(1,28)	(2,0)	(1,20)	(2,0)	(1,31)	(2,0)	(1,01)	(1,0)	
Loss of interest in family, friends and acquaintances	2,18 (1,26)	2,0 (2,0)	2,13 (1,41)	1,5 (2,5)	2,24 (1,39)	2,0 (2,0)	2,73 (1,53)	3,0 (3,0)	2,33 (1,44)	2,0 (2,5)	2,67 (1,22)	3,0 (2,0)	0,6755
Loneliness	2,96 (1,37)	3,0 (2,0)	2,25 (1,53)	1,5 (2,5)	2,56 (1,47)	2,0 (3,0)	2,87 (1,41)	3,0 (2,0)	2,83 (1,47)	3,0 (2,5)	2,78 (1,30)	3,0 (1,0)	0,5102
Spending less time with family or friends	2,99 (1,36)	3,0 (2,0)	2,63 (1,63)	2,5 (3,0)	2,76 (1,48)	3,0 (3,0)	2,47 (1,30)	3,0 (2,0)	2,75 (1,42)	3,0 (3,0)	3,22 (1,39)	4,0 (1,0)	0,6922
Loss of motivation	3,49 (1,14)	3,0 (1,0)	3,25 (1,13)	3,0 (1,5)	2,96 (1,24)	3,0 (2,0)	3,13 (1,30)	3,0 (2,0)	3,33 (1,23)	3,5 (1,5)	3,22 (1,39)	3,0 (1,0)	0,6511
Loss of interest in work or other activities	2,97 (1,23)	3,0 (2,0)	2,69 (1,20)	2,5 (2,0)	2,68 (1,28)	3,0 (2,0)	3,00 (1,25)	3,0 (2,0)	3,08 (1,31)	3,0 (2,0)	3,00 (1,32)	3,0 (1,0)	0,9052
Avoiding work and other activities	2,70 (1,19)	3,0 (2,0)	2,38 (1,41)	2,0 (2,5)	2,56 (1,33)	2,0 (3,0)	2,80 (1,47)	3,0 (3,0)	2,83 (1,47)	3,0 (2,5)	2,33 (1,12)	2,0 (1,0)	0,8290
Loss of pleasure and life satisfaction	2,74 (1,31)	3,0 (2,0)	2,50 (1,37)	2,0 (2,0)	2,64 (1,32)	3,0 (3,0)	2,87 (1,36)	3,0 (2,0)	3,00 (1,48)	3,0 (2,5)	2,78 (0,97)	3,0 (1,0)	0,9327
Feeling tired	3,86 (1,16)	4,0 (2,0)	4,19 (0,91)	4,0 (1,0)	3,68 (1,25)	4,0 (2,0)	3,67 (1,5)	4,0 (1,0)	4,00 (0,95)	4,0 (1,5)	3,89 (0,78)	4,0 (1,0)	0,7527
Trouble falling asleep or sleeping for too long	3,26 (1,44)	3,0 (3,0)	3,81 (0,98)	4,0 (1,5)	3,04 (1,31)	3,0 (2,0)	3,20 (1,08)	3,0 (1,0)	3,67 (0,98)	3,5 (1,5)	3,22 (1,09)	3,0 (1,0)	0,5002
Decreased or increased appetite	2,89 (1,23)	3,0 (2,0)	2,81 (1,28)	2,0 (2,0)	2,88 (1,23)	3,0 (2,0)	2,80 (1,26)	3,0 (2,0)	3,25 (1,06)	3,0 (1,0)	2,67 (0,87)	3,0 (1,0)	0,8757
Loss of interest in sex	2,09 (1,18)	2,0 (2,0)	3,06 (1,23)	3,0 (2,0)	2,32 (1,28)	2,0 (2,0)	3,20 (1,08)	3,0 (2,0)	3,33 (1,37)	4,0 (1,0)	3,56 (0,88)	4,0 (1,0)	0,0001
Worrying about your health	2,78 (1,22)	3,0 (2,0)	3,00 (1,21)	3,0 (2,0)	2,88 (1,27)	3,0 (2,0)	2,80 (1,47)	3,0 (3,0)	3,33 (1,30)	4,0 (2,0)	3,11 (0,60)	3,0 (0,0)	0,7331
Occurrence of suicidal thoughts	1,50 (0,90)	1,0 (1,0)	1,44 (0,81)	1,0 (0,5)	1,32 (0,95)	1,0 (0,0)	2,00 (1,51)	1,0 (3,0)	1,50 (0,52)	1,5 (1,0)	1,44 (0,72)	1,0 (1,0)	0,4531
Would you like to end your life?	1,36 (0,69)	1,0 (1,0)	1,31 (0,47)	1,0 (1,0)	1,24 (0,66)	1,0 (0,0)	2,00 (1,51)	1,0 (3,0)	1,33 (0,49)	1,0 (1,0)	1,44 (0,88)	1,0 (0,0)	0,5956
Do you have a plan to hurt yourself?	1,26 (0,64)	1,0 (0,0)	1,31 (0,60)	1,0 (0,5)	1,04 (0,20)	1,0 (0,0)	1,80 (1,37)	1,0 (1,0)	1,25 (0,45)	1,0 (0,5)	1,00 (0,0)	1,0 (0,0)	0,0951

Legend: 1 – never, 2 – seldom, 3 – sometimes, 4 – often, 5 – very often; $p < 0,05$ Test K-W

Source: Own elaboration based on the research results.

Table 3. Form of studies (full-time, part-time) and symptoms of depressive disorders manifested by students

Questions	Aver.	Me	Min.	Max	QD	SD	Aver	Me	Min	Max	QD	SD	P
	Full-time studies						Part-time studies						
Feeling discouraged	3,15	3,0	1,0	5,0	2,0	1,04	3,00	3,0	1,0	5,0	2,0	1,10	0,559507
Feeling hopeless	3,20	3,0	1,0	5,0	1,0	0,98	3,09	3,0	1,0	5,0	1,0	1,03	0,679935
Low self-esteem	2,30	2,0	1,0	5,0	2,0	1,22	2,17	2,0	1,0	5,0	2,0	1,22	0,582647
Feelings of worthlessness and inadequacy	3,40	3,0	1,0	5,0	1,0	1,04	3,13	3,0	1,0	5,0	2,0	1,29	0,293821
Guilt or shame	2,61	3,0	1,0	5,0	1,0	1,22	2,67	3,0	1,0	5,0	2,0	1,30	0,926869
Criticizing and blaming yourself	2,81	3,0	1,0	5,0	2,0	1,25	2,80	3,0	1,0	5,0	3,0	1,34	0,174924
Problems with making decisions	2,52	2,0	1,0	5,0	3,0	1,30	2,50	2,0	1,0	5,0	3,0	1,36	0,765617
Loss of interest in family, friends and acquaintances	2,39	2,0	1,0	5,0	2,0	1,23	2,13	2,0	1,0	5,0	2,0	1,09	0,346659
Loneliness	2,71	3,0	1,0	5,0	3,0	1,34	2,87	3,0	1,0	5,0	2,0	1,29	0,641425
Spending less time with family or friends	3,08	3,0	1,0	5,0	2,0	1,21	2,96	3,0	1,0	5,0	2,0	1,30	0,091674
Loss of motivation	2,27	2,0	1,0	5,0	2,0	1,34	2,30	2,0	1,0	5,0	2,0	1,33	0,966188
Loss of interest in work or other activities	2,81	3,0	1,0	5,0	2,0	1,42	2,74	3,0	1,0	5,0	3,0	1,39	0,006858

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Avoiding work and other activities	2,83	3,0	1,0	5,0	3,0	1,43	2,91	3,0	1,0	5,0	2,0	1,35	0,913559
Loss of pleasure and life satisfaction	3,36	3,0	1,0	5,0	1,0	1,08	3,20	3,5	1,0	5,0	2,0	1,41	0,011549
Feeling tired	2,86	3,0	1,0	5,0	2,0	1,20	3,02	3,0	1,0	5,0	2,0	1,31	0,614409
Feeling discouraged	2,68	3,0	1,0	5,0	2,0	1,24	2,57	2,0	1,0	5,0	3,0	1,36	0,594182
Feeling hopeless	2,75	3,0	1,0	5,0	2,0	1,25	2,70	3,0	1,0	5,0	3,0	1,43	0,168861
Low self-esteem	3,91	4,0	1,0	5,0	2,0	0,99	3,74	4,0	1,0	5,0	2,0	1,32	0,143771
Trouble falling asleep or sleeping for too long	3,44	3,0	1,0	5,0	1,0	1,18	3,00	3,0	1,0	5,0	3,0	1,49	0,041297
Decreased or increased appetite	2,93	3,0	1,0	5,0	2,0	1,15	2,78	3,0	1,0	5,0	2,0	1,26	0,474241
Loss of interest in sex	2,64	3,0	1,0	5,0	3,0	1,32	2,28	2,0	1,0	5,0	2,0	1,20	0,468114
Worrying about your health	2,98	3,0	1,0	5,0	2,0	1,18	2,67	2,0	1,0	5,0	2,0	1,32	0,183486
Occurrence of suicidal thoughts	1,50	1,0	1,0	5,0	1,0	0,95	1,52	1,0	1,0	5,0	1,0	0,94	0,745022
Would you like to end your life?	1,44	1,0	1,0	5,0	1,0	0,84	1,33	1,0	1,0	4,0	0,0	0,70	0,938067
Do you have a plan to hurt yourself?	1,27	1,0	1,0	4,0	0,0	0,64	1,26	1,0	1,0	5,0	0,0	0,80	0,391662

Legend: 1 – never, 2 – seldom, 3 – sometimes, 4 – often, 5 – very often; $p < 0,05$ Test K-W

Source: Own elaboration based on the research results.

The data contained in Table 3 indicate the importance of the variable “form of studies” (full-time, part-time) carried out by students for the manifestations of depressive disorders. Depressive disorders such as loneliness ($p=0.006858$), loss of motivation ($p=0.011549$) and problems with falling asleep ($p=0.041297$) were significant in the statistical analysis for the indicated variable. On the other hand, the statistical analysis concerning the significance of the influence of the variable "field of study" shows that its significance for the occurrence of such depressive disorders as: feeling of discouragement - $p = 0.041894$; criticizing and blaming oneself - $p=0.012720$; loss of interest in sex - $p=0.005327$; suicidal thoughts - $p = 0.008459$; would you like to end your life? - $p = 0.004564$; plan to hurt yourself - $p = 0.016719$. Appropriate data are presented in Table 4.

Table 4. Field of study and symptoms of depressive disorders manifested by students

Question	Aver.	Me	Min	Max	QD	SD	Aver.	Me	Min	Max	QD	SD	P
	Field of study: pedagogy						Field of study: social work						
Feeling sad/depressed	3,09	3,0	1,0	5,0	2,0	1,04	3,15	3,0	1,0	5,0	2,0	1,10	0,898464
Worse mood	3,16	3,0	1,0	5,0	1,0	0,99	3,17	3,0	1,0	5,0	2,0	1,03	0,349391
Crying fits	2,19	2,0	1,0	5,0	2,0	1,15	2,43	2,0	1,0	5,0	3,0	1,35	0,213878
Feeling discouraged	3,26	3,0	1,0	5,0	1,0	1,14	3,45	4,0	1,0	5,0	1,0	1,10	0,041894
Feeling hopeless	2,58	3,0	1,0	5,0	1,0	1,21	2,74	3,0	1,0	5,0	3,0	1,31	0,492833
Low self-esteem	2,79	3,0	1,0	5,0	2,0	1,25	2,85	3,0	1,0	5,0	2,0	1,33	0,497944
Feelings of worthlessness and inadequacy	2,39	2,0	1,0	5,0	2,0	1,27	2,79	3,0	1,0	5,0	3,0	1,38	0,092225
Guilt or shame	2,19	2,0	1,0	5,0	2,0	1,12	2,57	2,0	1,0	5,0	3,0	1,31	0,032864
Criticizing and blaming yourself	2,75	3,0	1,0	5,0	2,0	1,30	2,79	3,0	1,0	5,0	3,0	1,38	0,012720
Problems with making decisions	3,00	3,0	1,0	5,0	2,0	1,21	3,13	3,0	1,0	5,0	2,0	1,28	0,750628
Loss of interest in family life	2,19	2,0	1,0	5,0	2,0	1,31	2,47	2,0	1,0	5,0	3,0	1,38	0,457531
Loneliness	2,73	3,0	1,0	5,0	3,0	1,42	2,91	3,0	1,0	5,0	2,0	1,40	0,478615
Spending less time with family or friends	2,78	3,0	1,0	5,0	3,0	1,39	3,02	3,0	1,0	5,0	3,0	1,44	0,334074
Loss of motivation	3,31	3,0	1,0	5,0	2,0	1,25	3,32	3,0	1,0	5,0	1,0	1,04	0,388900
Loss of interest in work	3,00	3,0	1,0	5,0	2,0	1,23	2,70	3,0	1,0	5,0	2,0	1,23	0,653585

Avoiding work and other activities	2,66	2,5	1,0	5,0	2,0	1,30	2,60	3,0	1,0	5,0	2,0	1,23	0,930499
Loss of pleasure	2,74	3,0	1,0	5,0	2,0	1,33	2,72	3,0	1,0	5,0	2,0	1,26	0,570386
Feeling tired	3,82	4,0	1,0	5,0	2,0	1,16	3,96	4,0	1,0	5,0	2,0	0,98	0,530250
Problems with falling asleep	3,21	3,0	1,0	5,0	2,0	1,34	3,51	4,0	1,0	5,0	1,0	1,18	0,367396
Decreased or increased appetite	2,84	3,0	1,0	5,0	2,0	1,17	3,00	3,0	1,0	5,0	2,0	1,22	0,910363
Loss of interest in sex	2,34	2,0	1,0	5,0	2,0	1,18	2,96	3,0	1,0	5,0	3,0	1,44	0,005327
Worrying about your health	2,84	3,0	1,0	5,0	2,0	1,23	3,00	3,0	1,0	5,0	2,0	1,22	0,128622
Do you have suicidal thoughts?	1,39	1,0	1,0	5,0	0,0	0,85	1,77	1,0	1,0	4,0	1,0	1,09	0,008459
Would you like to end your life?	1,27	1,0	1,0	5,0	0,0	0,64	1,70	1,0	1,0	4,0	1,0	1,02	0,004564
Do you have a plan to hurt yourself?	1,21	1,0	1,0	4,0	0,0	0,63	1,38	1,0	1,0	5,0	1,0	0,80	0,016719

Legend: 1 –never, 2-seldom, 3 -sometimes, 4-often, 5- very often; $p < 0,05$ Test K-W

Source: Own elaboration based on the research results.

The variable "place of residence" of the respondents and its impact on depressive disorders of students were also subject to statistical analysis. The data in Table 5 shows that the indicated variable is significantly significant for two depressive disorders: self-harm plan - $p = 0.041539$ and low self-esteem - $p = 0.073605$. For the other analyzed depressive disorders, the significance is present, but it is not so significant.

Table 5. Place of residence and symptoms of depressive disorders manifested by students

Question	Village						Town/City						P
	Aver.	Me	Min	Max	QD	SD	Aver.	Me	Min	Max	QD	SD	
Feeling sad/depressed	3,08	3,0	1,0	5,0	2,0	1,05	3,13	3,0	1,0	5,0	2,0	1,08	0,994432
Worse mood	3,14	3,0	1,0	5,0	1,0	0,96	3,19	3,0	1,0	5,0	1,0	1,04	0,917460
Crying fits	2,22	2,0	1,0	5,0	2,0	1,24	2,32	2,0	1,0	5,0	2,0	1,19	0,771029
Feeling discouraged	3,34	3,0	1,0	5,0	1,0	1,07	3,29	4,0	1,0	5,0	1,0	1,20	0,439901
Feeling hopeless	2,59	3,0	1,0	5,0	1,0	1,21	2,68	3,0	1,0	5,0	2,5	1,29	0,372753
Low self-esteem	2,67	3,0	1,0	5,0	2,0	1,15	2,97	3,0	1,0	5,0	2,0	1,40	0,073605
Feelings of worthlessness and inadequacy	2,40	2,0	1,0	5,0	2,0	1,27	2,66	3,0	1,0	5,0	3,0	1,37	0,453194
Guilt or shame	2,31	2,0	1,0	5,0	2,0	1,17	2,31	2,0	1,0	5,0	2,0	1,22	0,970510
Criticizing and blaming yourself	2,76	3,0	1,0	5,0	2,0	1,29	2,76	3,0	1,0	5,0	3,0	1,36	0,308075
Problems with making decisions	3,07	3,0	1,0	5,0	2,0	1,17	3,00	3,0	1,0	5,0	2,0	1,32	0,263818
Loss of interest in family life	2,22	2,0	1,0	5,0	2,0	1,28	2,35	2,0	1,0	5,0	2,5	1,40	0,507214
Loneliness	2,76	3,0	1,0	5,0	3,0	1,41	2,82	3,0	1,0	5,0	2,5	1,41	0,818743
Spending less time with family or friends	2,77	3,0	1,0	5,0	3,0	1,43	2,96	3,0	1,0	5,0	2,0	1,38	0,858805
Loss of motivation	3,28	3,0	1,0	5,0	1,0	1,19	3,35	3,0	1,0	5,0	1,0	1,19	0,770461
Loss of interest in work	2,93	3,0	1,0	5,0	2,0	1,23	2,88	3,0	1,0	5,0	2,0	1,25	0,997621
Avoiding work and other activities	2,60	2,0	1,0	5,0	2,0	1,27	2,69	3,0	1,0	5,0	2,0	1,28	0,822620
Loss of pleasure	2,71	3,0	1,0	5,0	2,0	1,26	2,76	3,0	1,0	5,0	2,5	1,36	0,537385
Feeling tired	3,82	4,0	1,0	5,0	2,0	1,12	3,91	4,0	1,0	5,0	2,0	1,09	0,940083
Problems with falling asleep	3,18	3,0	1,0	5,0	2,0	1,34	3,46	4,0	1,0	5,0	1,0	1,23	0,594962
Decreased or increased appetite	2,84	3,0	1,0	5,0	2,0	1,20	2,94	3,0	1,0	5,0	2,0	1,16	0,348335
Loss of interest in sex	2,48	2,0	1,0	5,0	3,0	1,31	2,59	2,5	1,0	5,0	3,0	1,28	0,555406
Worrying about your	2,89	3,0	1,0	5,0	2,0	1,26	2,88	3,0	1,0	5,0	2,0	1,19	0,436750

health													
Do you have suicidal thoughts?	1,40	1,0	1,0	5,0	0,0	0,84	1,65	1,0	1,0	5,0	1,0	1,05	0,290903
Would you like to end your life?	1,29	1,0	1,0	4,0	0,0	0,67	1,54	1,0	1,0	5,0	1,0	0,92	0,266746
Do you have a plan to hurt yourself?	1,18	1,0	1,0	5,0	0,0	0,57	1,37	1,0	1,0	4,0	0,0	0,81	0,041539

Legend: 1 –never, 2-seldom, 3 -sometimes, 4-ofien, 5- very often; $p < 0,05$ Test K-W

Source: Own elaboration based on the research results.

Discussion

The goal set in the study was achieved. The research has provided worth-noticing evidence that the students often and very often show symptoms of depressive disorders, such as: a sense of discouragement, a sense of fatigue, loss of motivation to act, spending less time with family and friends, sleep problems, worse mood and problems with making decisions, loneliness, lack of interest in work and tasks or actions undertaken so far, feeling sad and depressed, and worrying about your own health, which are associated with experiencing social isolation caused by the development of the Covid-19 virus pandemic worldwide, Poland included. These results confirm the previous research on anxiety, fear, and depression among young people caused by the coronavirus pandemic. Such studies were carried out by Pfefferbaum & North (2020); Holmes et al. (2020); Cao, Fang et al. (2020); Chang, Yuan et al., (2020); Qiu & Shen & Zhao et al. (2020); Gouin & MacNeil & de la Torre-Luque & Chartrand & Chadi et al. (2023). The research was also conducted in China by Lozano-Vargas (2020) among people aged 18–30 who, due to the COVID-19 pandemic, experienced a moderate to severe mental disorder, including depression. The results of the research by Tang, Hu, Hu et al. (2020) among university students from Chengdu Province and Chongqing City from January 30th to February 8th, 2020, indicate an incidence of post-traumatic stress disorder and depression of 2.7% and 9.0%, respectively, one month after the COVID-19 outbreak. Also, the studies done by Marelli et al., (2020), conducted among Italian students, show strong evidence of experiencing many mental disorders (including fear, anxiety, stress, depression, etc.). It is also worth mentioning the research conducted in Poland in the field of the relationship between depressive disorders and the existing pandemic caused by the COVID-19 virus. Such studies were carried out by Gambina & Sękowski & Woźniak-Prusb et al. (2020) on a nationwide random-quota sample of 1,179 adults living in Poland. The research shows that the index of the severity of depressive symptoms and generalized anxiety in the 18-34 age group more than doubled (before the pandemic, it covered 16.2% of respondents, and during the pandemic, it was 36.6%). On the other hand, people in the 18–24 age group showed the highest (significantly higher than other age groups) level of symptoms of depression and generalized anxiety during the epidemic (two weeks before the date of the study).

The symptoms of depressive disorders manifested by students were analyzed in the study also in terms of the following variables: age, form of study, field of study, and place of residence of the respondents. The age variable of students was highly significant for manifested depressive disorders, especially for such disorders as loss of interest in sex and self-harm. These results are fully confirmed by the research conducted by Gambina & Sękowski & Woźniak-Prusb et al. (2020), which shows that age is important in the onset (as well as intensification) of depressive disorders during the Covid-19 pandemic. Also, studies conducted in the UK by Pierce & Hope & Ford et al. (2020) on a sample of 17,452 people indicate the highest increase in the rate of the group of respondents aged 18–34 (from 18.9% in 2018–2019 to 27.3% in April 2020). As for the form and field of study, we have not found such detailed studies that would analyze these variables in terms of the occurrence of depressive disorders in students (young people). On the other hand, our research shows that the variable "form of study" (full-time, part-time studies) indicates high

statistical significance with such depressive disorders manifested by students as: loneliness ($p = 0.006858$), loss of motivation ($p = 0.011549$), and sleep problems ($p = 0.041297$). The variable "field of study" is also significant for such depressive disorders as: feeling of discouragement - $p = 0.041894$; criticizing and blaming oneself - $p = 0.012720$; loss of interest in sex - $p = 0.005327$; suicidal thoughts - $p = 0.008459$; would you like to end your life? - $p = 0.004564$; plan to hurt yourself - $p = 0.016719$. These data indicate the need to undertake further in-depth research in the field of depressive disorders manifested by students. All this is more than necessary, because previous research (Wang & Pan & Wan, et al., 2020; Pierce & Hope & Ford, et al., 2020) shows that among the groups most sensitive to the occurrence of depression, anxiety, and/or fear are women, students, and people with specific physical symptoms (e.g., headaches, muscle pain). Students turn out to be an important group, particularly vulnerable to impacts related to the pandemic because they are additionally subject to mental strain during the exam session. Their mental state depends on the degree of preparation for the exam or credit test and the attitude towards them. People exposed to situations in which they experience fear and anxiety are more likely to display depressive disorders, which pose a risk of suicidal attempts (Wan Mohd Yunus & Kauhanen & Sourander et al., 2022; Przybysz-Zaremba, 2019a; Przybysz-Zaremba, 2021; Gaylor & Krause & Welder & Cooper et al., 2023).

The study also analyzed the significance of the variable "place of residence"; it turned out that this variable is statistically significant for the occurrence of depressive disorders in students, such as: self-harm plan - $p = 0.041539$ and low self-esteem - $p = 0.073605$. These are very significant disorders that are strongly correlated with each other, and at the same time indicate suicidal actions by the individual. Low self-esteem is often associated with a sense of hopelessness, a hopeless situation, which often occurs in people with depressive disorders (O'Connor & Sheehy, 2002). It should also be emphasized that the research was conducted during the pandemic caused by the Covid-19 virus, which thus had an adverse effect on the well-being of the respondents. Previous studies indicate that the risk of increasing suicide attempts increases in people with psychotic depression and a high level of fear and anxiety, especially those related to psychomotor agitation (an individual cannot find a place for himself due to the suffering of depression, so the only way out situation turns out to be "finishing yourself"). Of course, making suicide attempts or committing suicide during the Covid-19 pandemic may be related to various factors, e.g. the introduction of a policy of social distancing, social isolation, disorders in the psychophysical functioning of a given individual (Makara-Studzińska 2013, p. 76; Białkowska, Mroczkowska et al., 2014; Przybysz-Zaremba, 2019, pp. 89–104), with unfavorable living and functioning conditions of the family where the individual lives (e.g. domestic violence, psychiatric disorders in one of the parents, addictions etc.) (Christoffersen, Poulsen, Nielsen, 2003, p. 350), as well as with the whole spectrum of factors found in the social environment, exemplified by the global Covid-19 pandemic. Additionally, the research shows that many university students during the pandemic also experienced financial stress, food insecurity and loneliness, which could also have an impact on poor mental health, an increase in depressive and anxiety symptoms (Gouin & MacNeil & de la Torre-Luque & Chartrand & Chadi et al., 2023).

Conclusions and Recommendations

According to the analysis of the presented research, Polish university students experienced many mental disorders during the pandemic, which are the main reason for suicidal behavior (and suicide attempts). And although these studies were pilot studies, they signal that the symptoms of mental disorders of students indicate an important problem that requires immediate preventive measures and, in some situations, also assistance and support measures. As the research showed, the place of residence of students had an impact on their low self-esteem and emerging suicidal thoughts. Therefore, it seems necessary to take immediate action in the field of caring for the mental well-being of students, because it can be assumed that they cannot count on professional

help in their place of residence. In this regard, it is recommended that:

- Universities have prepared appropriate documents in the field of providing help and support, of mainly psychological type; at the same time it is crucial that such measures are organized in such a way that a person who needs help is not afraid to use it. Looking back, some universities in Poland, including the university that employs the author of this study, have developed an ordinance containing regulations on providing psychological support to students and lecturers who can use the free help of a psychologist and psychotherapist by making an appointment in advance. Such forms of help and support were offered as: psychological consultation, psychological assistance, psychological counseling and psychoeducation.

However, due to the fear that someone might find out about the current situation a student experiences, few students took advantage of this opportunity to help, hence another recommendation may be implemented. It would be good for universities to develop proprietary tools that will be used to diagnose the symptoms of depressive disorders and suicidal behavior. Teaching staff (i.e. lecturers, readers and professors) should be trained in recognizing students' behavior that is classified by specialists as depression and/or suicidal behavior. This form of help seems to be needed because - as research confirms - depressive disorders that lead to suicidal behavior/attempts do not arise overnight, but develop as a result of the impact of a whole range of unfavorable factors on the individual, which are often integrated into together. In the event of observing the indicated disorders, a specialist-psychologist (employed at the University) should either provide appropriate support or refer the given person to an appropriate specialist.

To sum up, depressive disorders manifested by young people during the pandemic indicate a significant problem that requires immediate assistance and support, in which the main attention should be paid to the methods and techniques of caring for the mental well-being of a given individual. It is also recommended to undertake comprehensive diagnostic, preventive and assistance activities.

References

- American Psychiatric Association, 2013. In: *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed, p. 21. <https://doi.org/10.1176/appi.books.9780890425596>.
- Ang, A. L., Wahab, S., i in. (2019). Depressive symptoms in adolescents in Kuching, Malaysia: Prevalence and associated factors. *Pediatrics International: Official Journal Of The Japan Pediatric Society*, 61 (4), 404-410. <https://doi.org/10.1111/ped.13778>.
- Bar-Zomer, J., Brunstein Klomek, A. (2018). Attachment to Parents As a Moderator in the Association between Sibling Bullying and Depression or Suicidal Ideation among Children and Adolescents. *Frontiers In Psychiatry*, 12 (9), 72. <https://doi.org/10.3389/fpsy.2018.00072>.
- Bertha, E.A., Balazs, J., 2013. Subthreshold depression in adolescence: a systematic review. *European Child & Adolescent Psychiatry* 22 (10), 589–603. <https://doi.org/10.1016/j.jad.2013.06.010>.
- Białkowska J., Mroczkowska D., Zomkowska E., Rakowska A. (2014). Ocena zdrowia studentów na podstawie Skróconego Kwestionariusza Zdrowia Pacjenta. [Evaluation of students' health on the basis of the Short Patient's Health Questionnaire.] *Hygeia Zdrowie publiczne* 49(2), 365–369.
- Bruffaerts, R., Mortier, P., Kiekens, G., Auerbach, R. P., Cuijpers, P., Demyttenaere, K., Green, J. G., Nock, M. K., & Kessler, R. C. (2018). Mental health problems in college freshmen: Prevalence and academic functioning. *Journal of Affective Disorders*, 225(July), 97–103. <https://doi.org/10.1016/j.jad.2017.07.044>
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 287. <https://doi.org/10.1016/j.psychres.2020.112934>
- Chang, J., Yuan, Y., Wang, D. (2020). Mental health status and its influencing factors among college students during the epidemic of COVID-19. *Journal of Southern Medical University*, 40(2), 171-176. <https://doi.org/10.12122/j.issn.1673-4254.2020.02.06>.

- Christoffersen, M. N., Poulsen, H. D., & Nielsen, A. (2003). Attempted suicide among young people: risk factors in a prospective register based study of Danish children born in 1966. *Acta psychiatrica Scandinavica*, 108(5), 350–358. <https://doi.org/10.1034/j.1600-0447.2003.00165.x>
- Giorgi, G., Lecca, L. I., Alessio, F., Finstad, G. L., Bondanini, G., Lulli, L. G., Arcangeli, G., & Mucci, N. (2020). COVID-19-Related Mental Health Effects in the Workplace: A Narrative Review. *International journal of environmental research and public health*, 17(21), 7857. <https://doi.org/10.3390/ijerph17217857>
- Ding, Y., Xu, J., Huang, S., Li, P., Lu, C., & Xie, S. (2020). Risk Perception and Depression in Public Health Crises: Evidence from the COVID-19 Crisis in China. *International journal of environmental research and public health*, 17(16), 5728. <https://doi.org/10.3390/ijerph17165728>
- Dong, L., & Bouey, J. (2020). Public Mental Health Crisis during COVID-19 Pandemic, China. *Emerging infectious diseases*, 26(7), 1616–1618. <https://doi.org/10.3201/eid2607.200407>
- Gaylor E. M., Krause K. H., Welder L. E. et. Al. (2023). Suicidal Thoughts and Behaviors Among High School Students – Youth Risk Behavior Survey, United States, 2021. Supplement, 72 (Suppl-1), 45-54. <http://dx.doi.org/10.15585/mmwr.su7201a6>.
- Gambina M., Sękowski M., Woźniak-Prus M. i in. (2020). Uwarunkowania objawów depresji i lęku uogólnionego u dorosłych Polaków w trakcie epidemii Covid-19 - raport z pierwszej fali badania podłużnego, [Determinants of depression and generalized anxiety symptoms in adult Poles during the Covid-19 epidemic - report from the first wave of a longitudinal study.] http://psych.uw.edu.pl/wp-content/uploads/sites/98/2020/05/Uwarunkowania_objawow_depresji_leku_w_trakcie_pandemii_raport.pdf
- Gouin Jean-Philippe, MacNeil Sasha, de la Torre-Luque Alejandro, Chartrand Elise, Chadi Nicholas, Rouquette Alexandra, Boivin Michel, Côté Sylvana, Geoffroy Marie-Claude (2023). Depression, anxiety, and suicidal ideation in a population-based cohort of young adults before and during the first 12 months of the COVID-19 pandemic in Canada. *Canadian Journal of Public Health*, <https://doi.org/10.17269/s41997-023-00772-7>.
- Gromulska L. (2010). Zdrowie psychiczne w swietle dokumentów Swiatowej Organizacji Zdrowia [Mental health in the world according to WHO documents]. *Przegląd epidemiologiczny*, 64(1), 127–132.
- Hawryluck, L., Gold, W. L., Robinson, S., Pogorski, S., Galea, S., & Styra, R. (2004). SARS control and psychological effects of quarantine, Toronto, Canada. *Emerging infectious diseases*, 10(7), 1206–1212. <https://doi.org/10.3201/eid1007.030703>
- Holmes, E.A., O'Connor, R.C., Hugh, P., Irene, T., Simon, W., Louise, A., Clive, B., Helen, C., Roxane, C.S., Ian, E., et al. (2020). Multidisciplinary research priorities for the COVID19 pandemic: A call for action for mental health science, *The Lancet Psychiatry*, 7, 547- 560, [https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1).
- Hossain, M. M., Sultana, A., & Purohit, N. (2020). Mental health outcomes of quarantine and isolation for infection prevention: a systematic umbrella review of the global evidence. *Epidemiology and health*, 42, e2020038. <https://doi.org/10.4178/epih.e2020038>
- Kim, G. H., Ahn, H. S., & Kim, H. J. (2016). Type of sexual intercourse experience and suicidal ideation, plans, and attempts among youths: a cross-sectional study in South Korea. *BMC public health*, 16(1), 1229. <https://doi.org/10.1186/s12889-016-3895-y>
- Lozano-Vargas, A. (2020). Impact of the Coronavirus (COVID-19) epidemic on the mental health of healthcare personnel and the general population of China. *Journal of Neuro-Psychiatry*, 83(1), 51-56. <https://doi.org/10.20453/rmp.v83i1.3687>
- Makara-Studzińska M. (2013). Przyczyny prób samobójczych u młodzieży w wieku 14-18 lat. [Causes of suicide attempts in adolescents aged 14-18]. *Psychiatria*, t. 10, 2, 76.
- Marelli, S., Castelnuovo, A., Somma, A., Castronovo, V., Mombelli, S., Bottoni, D., Leitner, C., Fossati, A., & Ferini-Strambi, L. (2020). Impact of COVID-19 lockdown on sleep quality in university students and administration staff. *Journal of Neurology*, 268, 8-15. <https://doi.org/10.1007/s00415-020-10056-6>.
- Medina C. (1997). Suicidal Behaviors and Factors Related to Suicide among Mexican American Youth Identified As Seriously Emotionally Disturbed in Rural Settings. In: *Promoting Progress in Times of Change: Rural Communities Leading the Way*, RC 020 986. Reports Research/Technical (143), Speeches /Conference Papers (150), 257-263.
- Mikolajczyk, R. T., Brzoska, P., Maier, C., Ottova, V., Meier, S., Dudziak, U., Ilieva, S., & El Ansari, W. (2008). Factors associated with self-rated health status in university students: A cross-sectional study in three European countries. *BMC Public Health*, 8, 1–10. <https://doi.org/10.1186/1471-2458-8-215>

- O'Connor R., Sheehy N. (2002). Zrozumieć samobójcę [Understanding the suicide]. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- UNESCO (2020). Education from disruption to recovery, from <https://en.unesco.org/covid19/educationresponse/>
- Paho American Health Organization (2020a). Consideraciones sobre medidas de distanciamiento social y medidas relacionadas con los viajes en el contexto de la respuesta a la pandemia de COVID-19 [Considerations on social distancing measures and travel-related measures in the context of the response to the COVID-19 pandemic]. <https://cutt.ly/scePCAa>
- Paho American Health Organization (2020b). Enfermedad por el Coronavirus (COVID-19) [Coronavirus disease (COVID-19)]. <https://cutt.ly/McePf1N>
- Paho American Health Organization (2020c). Panorama general de las medidas actuales de distanciamiento social y evidencia necesaria para determinar el momento óptimo para relajar estas medidas [Overview of current social distancing measures and evidence needed to determine the optimal time to relax these measures.] <https://cutt.ly/jceAsVI>
- Pfefferbaum, B., & North, C.S. (2020). Mental health and the COVID-19 pandemic, *The New England Journal of Medicine*, 383, 510-512, <https://doi.org/10.1056/NEJMp2008017>.
- Pierce, M., Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., Kontopantelis, E., Webb, R., Wessely, S., McManus, S., & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. *The lancet. Psychiatry*, 7(10), 883–892. [https://doi.org/10.1016/S2215-0366\(20\)30308-4](https://doi.org/10.1016/S2215-0366(20)30308-4)
- Przybysz-Zaremba, M. (2019), Concerning Depression and Suicidal Behavior in Children and Youth – Selected Aspects and Research. *Pedagogical Contexts*, 1(12), 89–104. <https://doi.org/10.19265/KP.2019.11289>
- Przybysz-Zaremba, M. (2019a), Polymorphic dimensions of depression prevention and suicidal behavior of children and adolescents - review of selected studies and programs. *Pedagogical Contexts*, 2(13), 209-221. <https://doi.org/10.19265/KP.2019.213209>.
- Przybysz-Zaremba, M. (2021), Profilaktyka depresji i zachowań suicydalnych dzieci i młodzieży wobec wyzwań codzienności [Prevention of depression and suicidal behavior of children and youth against the challenges of everyday life]. *Annales Universitatis Mariae Curie-Skłodowska. Sectio J, Paedagogia-Psychologia*, 34(1), 119–130. <https://doi.org/10.17951/j.2021.34.1>.
- Sarmiento-Hernández, E., Camarena-Medellín, B., i in. (2019). Asociación entre el polimorfismo 5-HTTLPR, el intento suicida y la comorbilidad en adolescentes mexicanos con trastorno depresivo mayor [Association between 5-HTTLPR polymorphism, suicide attempt and comorbidity in Mexican adolescents with major depressive disorder]. *Actas Espanolas de Psiquiatria*, 47 (1), 1-6.
- Sokół-Szawłowska M., (2021). Mental health impact of quarantine during the COVID-19 pandemic, *Psychiatria*, 18(1), 57-62. <https://doi.org/10.5603/PSYCH.a2020.0046>.
- Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *General psychiatry*, 33(2), e100213. <https://doi.org/10.1136/gpsych-2020-100213>
- Talevi, D., Socci, V., Carai, M., Carnaghi, G., Faleri, S., Trebbi, E., di Bernardo, A., Capelli, F., & Pacitti, F. (2020). Mental health outcomes of the CoViD-19 pandemic. *Rivista di psichiatria*, 55(3), 137–144. <https://doi.org/10.1708/3382.33569>
- Tang, W., Hu, T., Hu, B., Jin, C., Wang, G., Xie, C., Chen, S., Xu, J. (2020). Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students, *Journal of Affective Disorders*, 274, 1–7, <https://doi.org/10.1016/j.jad.2020.05.009>.
- Wan Mohd Yunus, WMA, Kauhanen, L., Sourander, A. et al. (2022). Registered psychiatric service use, self-harm and suicides of children and young people aged 0–24 before and during the COVID-19 pandemic: a systematic review. *Child and Adolescent Psychiatry and Mental Health*, 16(15). <https://doi.org/10.1186/s13034-022-00452-3>.
- Wang C, Pan R, Wan X, et al. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19). Epidemic among the General Population in China. *International Journal of Environmental Research and Public Health*, 17(5), <https://doi.org/10.3390/ijerph17051729>
- Vaitkevičius, J. (1995). *Socialinės pedagogikos pagrindai* [Basics of social pedagogy]. Egald.

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