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Suicide Ideation, Depressive Symptoms, and Violence Exposure in Pre-Pandemic, Pandemic and Post-Restrictions Period: Cross-Sectional Research

Pandemi Öncesi, Pandemi Sırasında ve Kısıtlamalar Sonrası Dönemde İntihar Düşüncesi, Depresif Belirtiler ve Şiddete Maruz Kalma: Kesitsel Araştırma

Sinem CANKARDAŞ[a], Özge AKGÜL[a]

[a]Department of Psychology, İzmir Democracy University Faculty of Science and Letter, İzmir, Türkiye

ABSTRACT Objective: The coronavirus disease-2019 pandemic is a period of increased risks in terms of mental health. Studies carried out during the pandemic period showed that the frequency of suicidal thoughts and depression levels and domestic violence increased during a pandemic. Therefore, this study aimed to investigate the frequency of exposure to physical/sexual violence by someone they know or not, depressive symptoms, and suicide risk levels. **Material and Methods:** A convenience sampling method was used and volunteer students participate in the study after completing the informed consent form. Data were collected from three different samples: 229 participants answered the questions during the pandemic, 212 pre-pandemic period, and 112 post-restrictions period. Participants were asked questions about their demographic information, frequency of exposure to physical and sexual violence, suicidal thoughts/plans, and depressive symptoms. **Results:** It was observed that students who answered the questions during the pandemic had higher depression scores and a higher frequency of exposure to violence. No significant difference was observed between the groups in terms of suicide risk. **Conclusion:** In this study, it could be said that there is an increase in exposure to violence and depressive symptoms among university students during the pandemic. These data, which were obtained from similar samples, indicate that support services should be provided for university students, especially regarding the risk of mental distress that may develop due to the experience of violence after the pandemic.

Keywords: COVID-19; violence; depression; suicide risk

ÖZET Amaç: Koronavirüs hastalığı-2019 pandemisi ruh sağlığı açısından risklerin arttığı bir dönemdir. Pandemi döneminde yapılan araştırmalar, pandemi döneminde intihar düşüncelerinin sıklığının, depresyon düzeylerinin ve aile içi şiddetin arttığını göstermektedir. Bu çalışmada, üniversite öğrencilerinin tanıyıp tanımadıkları bir kişi tarafından fiziksel/cinsel şiddete maruz kalma sıklığı, depresif belirti ve intihar risk düzeylerinin araştırılması amaçlanmıştır. **Gereç ve Yöntemler:** Araştırmada kolayda örnekleme yöntemi kullanılmıştır. Gönüllü öğrenciler bilgilendirilmiş onam formunu doldurduktan sonra çalışmaya katılmıştır. Veriler üç farklı örneklemden toplanmıştır: Pandemi sırasında 229 katılımcı, pandemi öncesi dönemde 212 ve kısıtlamalar sonrasında 112 katılımcı soruları yanıtlamıştır. Katılımcılara demografik bilgileri, fiziksel ve cinsel şiddete maruz kalma sıklıkları, intihar düşünceleri ve depresif belirtileri hakkında sorular sorulmuştur. **Bulgular:** Pandemi döneminde soruları cevaplayan öğrencilerin depresyon puanlarının daha yüksek olduğu ve şiddete maruz kalma sıklığının daha yüksek olduğu görülmüştür. İntihar riski açısından gruplar arasında anlamlı fark gözlenmemiştir. **Sonuç:** Bu çalışmada, pandemi döneminde üniversite öğrencilerinde şiddete maruz kalma ve depresif belirtilerin arttığı söylenebilir. Benzer örneklerden elde edilen bu veriler, üniversite öğrencilerine özellikle pandemi sonrasında şiddet yaşanması nedeniyle gelişebilecek ruhsal sıkıntı riskine ilişkin destek hizmetlerinin sağlanması gerektiğini göstermektedir.

Anahtar Kelimeler: COVID-19; şiddet; depresyon; intihar riski

The coronavirus disease-2019 (COVID-19) pandemic is a period of increased risk in terms of mental health, both because the disease itself increases stress and because measures to protect against the disease can lead to personally challenging experiences. Research studies from different countries revealed that suicide ideation frequency, anxiety and depression levels of university students increased with the

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Correspondence: Sinem CANKARDAŞ
Department of Psychology, İzmir Democracy University Faculty of Science and Letter, İzmir, Türkiye
E-mail: sinem.cankardas@idu.edu.tr

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pandemic.[1] Although reduced social contact, misinformation, concerns about relatives and one's health, and being female are the commonly reported risk factors for mental health disorders during the pandemic; violence exposure would be the other risk factor for university students. Many studies reported that domestic violence rates increased following stay-at-home/lockdown orders.[2] Many students had to return home with the pandemic and witnessing or experiencing domestic violence risk increased for them. Studies with prospective comparative data typically reveal greater pandemic distress rates.[3] The study's objectives were to advance our knowledge of how the pandemic has impacted college students' suicidal ideation, depression symptoms, and exposure to violence.

Suicide and suicide attempts are serious public health concerns around the World. According to World Health Organization (WHO), due to suicide, every year over 800,000 people lose their lives.[4] After traffic accidents suicide is the second most common cause of death among college students, and between the ages of 15 and 29 years, it is the greatest cause of mortality the fourth place.[5,6] It affects not only the person and his or her family, and friends but also society such as health care providers and acquaintances. Therefore, this problem is a major concern and should be a top priority worldwide. After raising the suicide rates, in 2019, the World Federation for Mental Health announced the World Mental Health Day theme as suicide prevention. Unfortunately, this was followed by the 2020 COVID-19 pandemic-a disaster that could increase the risk of suicide.

Researchers reported that mental and economic problems, anxiety, and social isolation related the to COVID-19 pandemic may increase suicidal behavior risks.[7] One recent meta-analysis of 54 studies revealed that during the COVID-19 pandemic, the frequencies of self-harm, suicide ideation, and attempts were elevated, and those rates were higher compared to the pre-pandemic period.[8,9] Reported findings were in line with previous studies in the way that such contagious diseases led to higher suicide rates.[10] To illustrate, during the severe acute respiratory syndrome pandemic in China, suicide-related deaths increased for elderly women and people of low socioeconomic class.[11] The rates for higher suicide risks were similar for both the Spanish Flu pandemic and Ebola infections.[12]

According to the literature, suicide attempts are more common in populations subjected to stressful life events.[13] It is known that apart from exposure to single events, several stressful events have been reported to be linked with an increased likelihood of suicidal thoughts and behaviors.[14] Exposure to violence is one of the most significant risk factors leading to suicide, especially a traumatic experience in one's early life, and being exposed to violent behavior during childhood are the most established risk factors in later life.[15,16] Such earlier emotional and physical abuse are known to be both psychological and biological risk factors resulting in negative consequences in adulthood.[17]

Moreover, in addition to childhood sexual abuse, intimate partner violence, non-partner physical violence, being separated or widowed, and having a mother who had experienced intimate partner violence were found to be strongly associated with suicide attempts according to the data from WHO Mental Health Surveys collected from 23 countries.[18] Even after adjusting for psychiatric diseases, being a victim of bullying increases the probability of suicidal behaviors as an adult.[19] Suicide attempters who have experienced interpersonal violence have a higher risk of committing suicide.[20] In line with this, suicidal ideation is positively correlated with exposure to violence and post-traumatic stress disorder in victims of violence, particularly domestic violence.[21] Furthermore, while suicidal behavior is linked to somatic symptoms and substance abuse, suicidal ideation has been linked to depression according to substantial evidence.[22-24] Similarly, youths in domestic abuse situations have been reported to have an increased risk of planning and attempting suicide.[25] Suicide risk was also found to be higher among violent youths who had been exposed to violence themselves.[26]

Understanding how the pandemic affects university students' mental health is important. The present study aims to examine the frequency of university students' suicide ideation, depressive

symptom levels, and violence exposure during the pandemic. To determine whether these issues can be attributed to the pandemic or simply reflect typically high rates among college students, scores were also compared with the two different cohort samples: pre-pandemic period and post-restrictions period.

MATERIAL AND METHODS

PARTICIPANTS

The participants of the study were consisting of 553 volunteer university students who studied at Faculty of Economics and Administrative Sciences, Faculty of Education and Faculty of Science and Letters from three universities in İstanbul [Pre-pandemic: n=212, 79.2% women, M_{age} (SD_{age})=22.49 (4.01), During Pandemic: n=229, 71.6% women, M_{age} (SD_{age})= 22.43 (2.82), Post-restrictions: n=112, 71.4% women, M_{age} (SD_{age})=21.30 (3.03)]. Demographic differences between samples were accounted for to ensure that changes in variables can be attributable to the time period of the assessment (pre- vs. during the pandemic or post-restrictions) and not to other differences between the samples. Table 1 presents full demographic details for all samples.

MEASURES

Demographics: Demographics such as sex, birth date, and the university's name were collected by the demographic form.

Physical and Sexual Violence Exposure: The participants were asked if they ever experienced physical violence from someone they know (family member, friend, etc.), experienced physical violence from someone they do not know, experienced sexual violence from someone they know (family member, friend, etc.), and experienced sexual violence from someone they do not know. It was asked to define the frequency on a 4 Likert scale (0=Never, 1=Rarely, 2=Sometimes, 3=Often, 4=Very often).

The suicidal thoughts and plans: The suicide risk was measured by asking 4 questions adapted from the suicide risk questionnaires by the researchers. It was asked to define the frequency of the thoughts of attempting suicide in the last 3 months, making plans for how to commit suicide in the last 3 months, thoughts of attempting suicide in the last 1 year, and making plans for how to commit suicide in the last year in a 4 Likert scale (0=Never, 1=Rarely, 2=Sometimes, 3=Often, 4=Very often). The answers suicidal thoughts and plan items were grouped both to reduce the number of categories with less than 5 people, which is the assumption of being able to perform a chi-square test, and to see the frequency changes more clearly as follows: never (those who said never), sometimes (those who said rarely and sometimes); often (those who said often and very often).

***Depressive Symptoms*:** The Depression Rating Scale (DRS) was used to measure depressive symptoms. DRS is a self-report scale consisting of 19 items developed by Başoğlu and Şalcıoğlu.[27] Fourteen items of the scale measure Major Depressive Episode symptoms as defined in DSM-IV. The remaining 5 items measure irritability, hopelessness, somatization, crying spells, and decreased libido, which are common in patients with depression. The scale measures the level of discomfort with the symptoms in the items in the last week at four levels (0=Never bothered; 3=Very much bothered). In the study conducted with 205 people who had experienced an earthquake, the internal consistency value of the scale was α=0.94; It was stated that the item-total correlation ranged between 0.41 and 0.82. In the same study, the specificity of DRS was 0.86, the sen-

TABLE 1: Demographics of three samples.

		Pre-pandemic (n=212)	Pandemic (n=229)	Post-restrictions (n=112)	
Sex	Female	168 (79.2%)	164 (71.6 %)	80 (71.4%)	χ^2=4.072; p=0.131
	Male	44 (20.8%)	65 (28.4)	32 (28.6%)	
Age	Mean	22.49	22.43	21.30	
	SD	4.01	2.82	3.03	

SD: Standard deviation.

sitivity was 0.85, and the correct classification rate for those with a diagnosis of depression was found to be 85%.[27] In this study, the internal consistency of the scale was α=0.93.

PROCEDURE

The first COVID-19 case was detected on March 11, 2020, in Türkiye, and following this, the school closure decision was given on 14th March 2020. In the beginning, this decision was only for a few weeks so the university students stayed in the cities where they were. The universities decided to continue education on online platforms on the 23rd of March. In this study, the data collected between the dates of 15th December 2019-14th March 2020 were stated as "pre-pandemic" and this data was collected within the scope of "The violence experiences and mental health research of university students". The data collected between 15th March 2020 and 24th Jun 2021 were stated as "pandemic". As of July 2021, the Turkish Ministry of Internal Affairs stated that many restrictions such as curfews and meeting activities have been lifted. As of September 2021, face-to-face education has started. The same variables were measured from the students between October 2021 and January 2022, and although the COVID-19 pandemic is still ongoing, this group was named "post-pandemic" because the number of vital restrictions and deaths decreased. As a result, 212 participants constitute the pre-pandemic group, 229 participants constitute the pandemic group, and 112 constitute the post-pandemic group.

The convenience sampling method was used for this study. Researchers gave extra credit to the students for their research participation. For the study, an online survey link was created by researchers using an online tool (surveey.com) and shared with students. The protocol for the pandemic and following period cohort was approved by the Ethics Committee of Beykoz University (date: July 08, 2020, no: 2020/04). As stated before, the data collected from the pre-pandemic cohort sample was related to another study and it is approved by the Ethics Committee of İstanbul Arel University (dated March 24, 2017).

This study was carried out as a sub-study to observe the effect of the pandemic as a result of the emergence of the pandemic, during the continuation of a more comprehensive study on the effects of violence. The rules of the Declaration of Helsinki were complied with during the data collection process. Participation was volunteered and extra credit was given for participation.

STATISTICAL ANALYSIS

The IBM SPSS Statistics 25.0 (IBM Corporation/USA) program was used to conduct the analysis. Percentage distribution, mean and standard deviasions wre reported. Chi-square test was used to compare suicidal thoughts and plans frequency between three periods and violence experiences. As it was indicated that acceptable limits of skewness and kurtosis values are ±2, and the distributions of depression scores met this condition, parametric tests were used.[28] One-way ANOVA and Bonferroni post hoc tests were used for group comparisons.

RESULTS

The results of the study revealed that 193 students (34.9%) among all thought about suicide at least one time in the past year. Among these students, 112 of them (76.7%) have made plans about how to commit suicide. 132 students (23.9%) have reported that they thought about suicide at least once in the last 3 months. Among them, 71 of the students (74.2%) have made plans about how to commit suicide. The frequency of suicide ideation for the last 3 months can be found in Figure 1 and for the past year in Figure 2 for three sub-groups. Although, the frequency of the students who thought or planned suicide seemed to raised slightly in the pandemic period, there is no significant difference between groups ($p>0.05$).

Violence exposure frequencies were analyzed based on the time period and the distribution is as shown in Figure 3. The pandemic period is the period in which the highest number of students reported being subjected to violence by both acquaintances and strangers. It was found that the number of students who stated that they had been subjected to physical or sexual violence by someone they did not know at least once differed significantly in three periods [χ^2 (2, n=553)=8.606, p=0.014]. Similarly, it

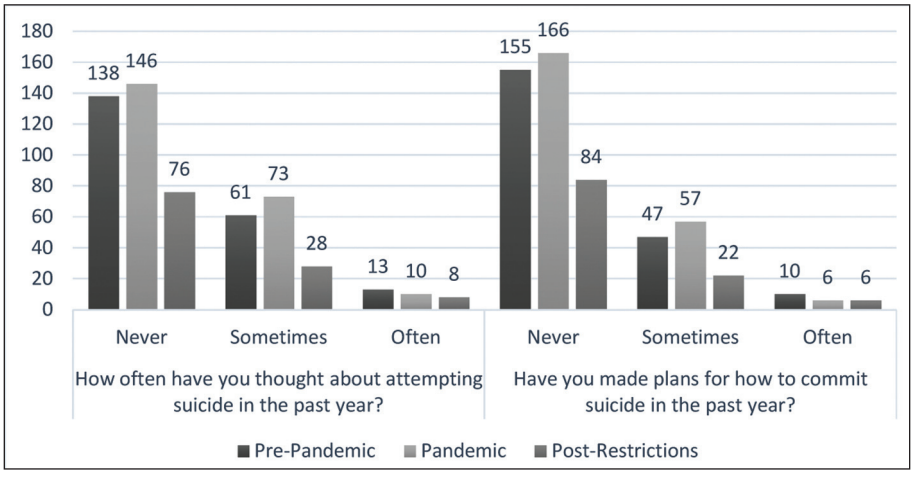

FIGURE 1: Suicide ideation frequency in the past year.

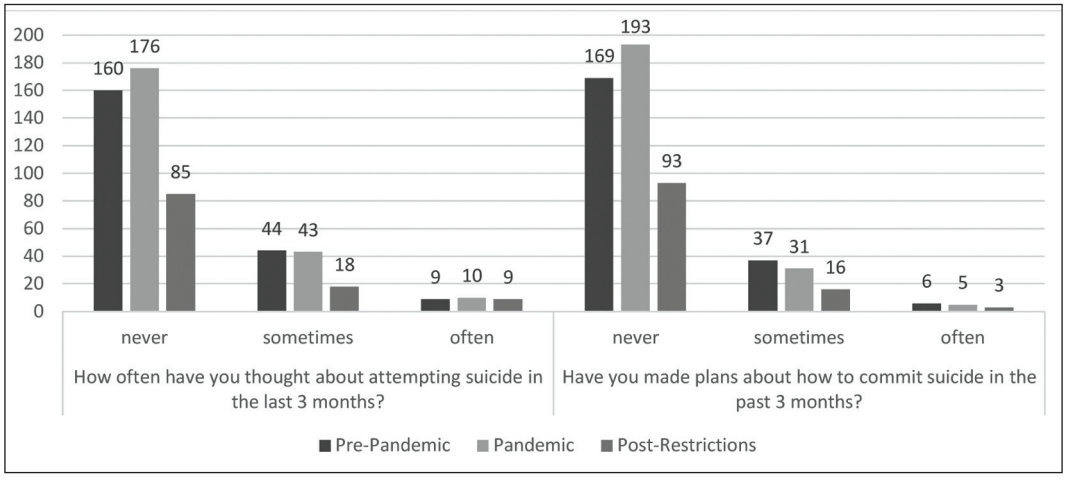

FIGURE 2: Suicide ideation frequency in the last three months.

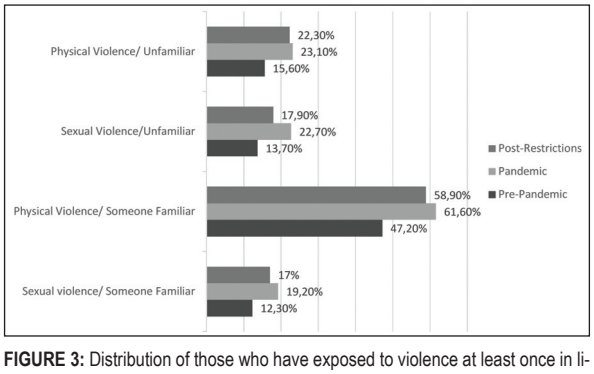

FIGURE 3: Distribution of those who have exposed to violence at least once in lifetime.

was found that the number of students who stated that they had been subjected to physical or sexual violence by someone familiar at least once differed significantly in three periods [χ^2 (2, n=553)=13.642, p=0.001].

A comparison of the three groups' depression scores can be found in Table 2. It could be seen that all variables differed between the groups. Post hoc comparisons using the t Test with Bonferroni correction indicated that the depression mean score of the pre-pandemic period group (M=16.33, SD=12.13) was significantly lower than the pandemic period (M=20.29, SD=12.43) and post-restrictions group (M=19.85, SD=12.27). However, the depression levels of pandemic period did not significantly differ from the post-restrictions period ($p<0.05$).

TABLE 2: Depression means of the three groups.

		m	SD	F
Depression total score	Pre-pandemic	16.33	12.23	6.366*
	Pandemic	20.29	12.43	
	Post-restrictions	19.85	12.27	

*p<0.01; SD: Standard deviation.

DISCUSSION

The present study investigated the frequency of violence exposure, depressive symptom levels, and suicide risk levels among university students, and whether the frequencies changed during the COVID-19 pandemic. The results of the study showed that students who answered the questions prior to the pandemic had lower depression scores when compared to the pandemic and post-restrictions groups which clearly indicates the negative effect of COVID pandemic on mental health. The high depression scores of the post-restrictions group may indicate the ongoing negative impact of the pandemic on students' mental health. Moreover, although the suicidal thought and plan frequency didn't differ between groups, results point out that approximately one-third of the students had thought about suicide and made plans.

One of the findings of our study was the increased frequency of exposure to violence during the COVID-19 pandemic. Higher levels of stress, depression, isolation, and unemployment may have increased domestic abuse and exposure to violence. Especially, students' violence exposure from someone they know looks increased when compared to the pre-pandemic period. It is known that domestic violence is increased during economic recessions leading to conflicts.[29] Besides financial constraints, COVID-19 pandemic-related quarantine may be another reason. The COVID-19 pandemic led people to live in quarantine and spend many hours together as compared to before the pandemic. Sometimes a home can be a dangerous place to live in, it can be full of physical, psychological, and sexual violence. For this reason, it can be thought that the risk of exposure to perpetrators is increased, giving them additional power and control. Victims may be less likely to escape from abusers and seek help due to restrictions. In that case, staying at home to be safe during a pandemic can be a paradox. Individuals might have protected themselves from the virus, yet they could not prevent themselves from getting abused. In that way, a significant increase in domestic violence is reported globally during the pandemic.[29] With school closures, most university students had to return to their homes and with all these negative consequences of the pandemic, they may become more vulnerable to being abused by someone they know. Additionally, the increase in the frequency of being exposed to violence by someone he/she does not know during the pandemic and its subsequent process is also thought-provoking. Within the scope of pandemic measures, a curfew has been imposed on people under the age of 20 and over the age of 65 in Türkiye. In this respect, it can be thought that students over the age of 20 may have gone out of the house during the COVID-19 epidemic and may have been exposed to violence by someone they do not know. On the other hand, although it is not possible for physical violence, the online form of sexual violence is possible. With COVID-19, the continuation of many jobs, including education, over the internet has increased the use of screen time in young people. This may have increased the likelihood of cyberbullying, sexually explicit speech, and exposure to online pornographic content. Since detailed information on the violence experienced has not been obtained, it is not known what the probability will be. All these results indicate that more studies should be done on students' experiences of violence during the pandemic period.

Another finding of the study was students had higher depression scores following the pandemic. The COVID-19 pandemic emerged approximately two years ago and with its rapid spread and uncertainty, several psychological disorders emerged glob-

ally. Therefore, it is significant to screen people's mental states during this challenging period. Many studies investigating depression during pandemic reported higher depression-related symptoms showing that youth mental health was affected by COVID-19 adversely.[30] In this line, one recent meta-analysis reported that the prevalence of depression was 33.7% in the general population.[31] Another meta-analysis reported increased depression symptoms globally among youth during the COVID-19 pandemic with a prevalence of 25.2%.[32] When compared to top pre-pandemic times, youth mental health disorders nearly doubled during the COVID-19 pandemic. The restrictions like quarantine, lock-down of schools, isolation, and loss of interactions with peers may have led the adolescents to feel depressed. Also, it is known that school-based education and counselling are very significant in detecting psychological problems, and when this opportunity has been taken away because of the pandemic, adolescents' psychological well-being may not have been assessed properly. Due to pandemic restrictions, stressors like economic recession and loneliness triggered by COVID-19 were suggested as possible risk factors for suicidality during the pandemic.

The detrimental effects of the COVID-19 pandemic on mental health have been reported in many types of research, especially in adolescent depression.[33] Considering social isolation and loneliness, suicidal thoughts and behavior may occur. There is evidence that increased feelings of loneliness cause psychological problems during the COVID-19 pandemic.[34] It can be thought that the COVID-19 pandemic may increase the risk of suicide. It is well known that depression is related to suicidal ideation, and is thought to be one of the risk factors for suicidality in adolescents. In the present study, although the depression levels were higher among the students both in the pandemic and post-restrictions groups, suicidal thought and plan frequency didn't differ between groups. Interestingly, there was a trend toward decreased reported suicidal thoughts and plan frequency in last three months but increased in the last one year among the pandemic group. Social support could have played a protective role in suicidal ideation in line with previous studies reporting that adolescents who have low parental and peer social support, are more likely to have suicidal ideation.[35] Therefore, getting social support may lower suicidal ideation in turn. Because of the lockdowns, living with significant others may have reduced those ideas by providing emotional support. In the post-restriction period, face-to-face education has started and students go back to campuses. It was observed that the frequency of suicidal thoughts decreased slightly again in this period, and this is lower than in the pre-pandemic period. This result would be pointing out the possible protective effect of the lockdowns by being with the family.

LIMITATIONS

This research has some limitations. First, due to the risks of the pandemic, the data was gathered through online self-reports which could have led to over or under-reporting of depressive symptoms. The lack of any clinical evaluation is one of the limitations of the study. In further studies, interview-based methods could provide a deeper understanding of mental health problems. Also, the research was cross-sectional. Considering that the COVID-19 pandemic continues to evolve, running longitudinal studies might be beneficial to see the long-term effects of the pandemic. Moreover, multi-method approaches might be considered to understand the complex dynamics of pandemics including suicidality and psychiatric symptoms. Despite all these limitations, these data obtained from three samples with similar characteristics in different periods give an idea about the possible negative and positive impact of the pandemic on the mental health of university students.

CONCLUSION

This study highlights several directions for future research. The findings of the study show that exposure to violence, prolonged isolation, and school lockdowns may harm adolescents' psychological well-being and underline the need for psychological support for university students. Public health officials, governments, and educational units should work together to raise public awareness and offer insight into intervention programs for mental health

problems. Also, university health services should try web-based psychoeducation programs for those who are in need.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Sinem Cankardaş;* ***Design:*** *Sinem Cankardaş;* ***Control/Supervision:*** *Sinem Cankardaş, Özge Akgül;* ***Data Collection and/or Processing:*** *Sinem Cankardaş, Özge Akgül;* ***Analysis and/or Interpretation:*** *Sinem Cankardaş, Özge Akgül;* ***Literature Review:*** *Özge Akgül;* ***Writing the Article:*** *Sinem Cankardaş, Özge Akgül;* ***Critical Review:*** *Sinem Cankardaş, Özge Akgül.*

REFERENCES

1. Gratz KL, Mann AJD, Tull MT. Suicidal ideation among university students during the COVID-19 pandemic: identifying at-risk subgroups. Psychiatry Res. 2021;302:114034. [Crossref] [PubMed] [PMC]
2. Piquero AR, Jennings WG, Jemison E, Kaukinen C, Knaul FM. Domestic violence during the COVID-19 pandemic - Evidence from a systematic review and meta-analysis. J Crim Justice. 2021;74:101806. [Crossref] [PubMed] [PMC]
3. Fruehwirth JC, Biswas S, Perreira KM. The Covid-19 pandemic and mental health of first-year college students: examining the effect of Covid-19 stressors using longitudinal data. PLoS One. 2021;16(3):e0247999. [Crossref] [PubMed] [PMC]
4. World Health Organization. (2023). Suicide. Retrieved from [Link]
5. Assari S. Multiplicative effects of social and psychological risk factors on college students' suicidal behaviors. Brain Sci. 2018;8(5):91. [Crossref] [PubMed] [PMC]
6. World Health Organization. Suicide Worldwide in 2019: Global Health Estimates. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO. [Link]
7. Samson K, Sherry SB. Projected increases in suicide in Canada as a consequence of COVID-19 revisited. Psychiatry Res. 2020;294:113492. [Crossref] [PubMed] [PMC]
8. Dubé JP, Smith MM, Sherry SB, Hewitt PL, Stewart SH. Suicide behaviors during the COVID-19 pandemic: a meta-analysis of 54 studies. Psychiatry Res. 2021;301:113998. [Crossref] [PubMed] [PMC]
9. Liu RT, Bettis AH, Burke TA. Characterizing the phenomenology of passive suicidal ideation: a systematic review and meta-analysis of its prevalence, psychiatric comorbidity, correlates, and comparisons with active suicidal ideation. Psychol Med. 2020;50(3):367-83. [Crossref] [PubMed] [PMC]
10. Benedictow OJ, Benedictow OL. The Black Death, 1346-1353: The Complete History. 1st ed. Woodbridge: Boydell & Brewer; 2004.
11. Cheung YT, Chau PH, Yip PS. A revisit on older adults suicides and Severe Acute Respiratory Syndrome (SARS) epidemic in Hong Kong. Int J Geriatr Psychiatry. 2008;23(12):1231-8. [Crossref] [PubMed]
12. Bitanihirwe BK. Monitoring and managing mental health in the wake of Ebola. Commentary. Ann Ist Super Sanita. 2016;52(3):320-2. [PubMed]
13. Bruffaerts R, Demyttenaere K, Borges G, Haro JM, Chiu WT, Hwang I, et al. Childhood adversities as risk factors for onset and persistence of suicidal behaviour. Br J Psychiatry. 2010;197(1):20-7. [Crossref] [PubMed] [PMC]
14. Stein DJ, Chiu WT, Hwang I, Kessler RC, Sampson N, Alonso J, et al. Cross-national analysis of the associations between traumatic events and suicidal behavior: findings from the WHO World Mental Health Surveys. PLoS One. 2010;5(5):e10574. [Crossref] [PubMed] [PMC]
15. Rajalin M, Hirvikoski T, Renberg ES, Åsberg M, Jokinen J. Exposure to early life adversity and interpersonal functioning in attempted suicide. Front Psychiatry. 2020;11:552514. [Crossref] [PubMed] [PMC]
16. Brezo J, Paris J, Vitaro F, Hébert M, Tremblay RE, Turecki G. Predicting suicide attempts in young adults with histories of childhood abuse. Br J Psychiatry. 2008;193(2):134-9. [Crossref] [PubMed]
17. Tidemalm D, Runeson B, Waern M, Frisell T, Carlström E, Lichtenstein P, et al. Familial clustering of suicide risk: a total population study of 11.4 million individuals. Psychol Med. 2011;41(12):2527-34. [Crossref] [PubMed] [PMC]
18. Devries K, Watts C, Yoshihama M, Kiss L, Schraiber LB, Deyessa N, et al; WHO Multi-Country Study Team. Violence against women is strongly associated with suicide attempts: evidence from the WHO multi-country study on women's health and domestic violence against women. Soc Sci Med. 2011;73(1):79-86. [Crossref] [PubMed]
19. Klomek AB, Sourander A, Kumpulainen K, Piha J, Tamminen T, Moilanen I, et al. Childhood bullying as a risk for later depression and suicidal ideation among Finnish males. J Affect Disord. 2008;109(1-2):47-55. [Crossref] [PubMed]
20. Jokinen J, Forslund K, Ahnemark E, Gustavsson JP, Nordström P, Asberg M. Karolinska Interpersonal Violence Scale predicts suicide in suicide attempters. J Clin Psychiatry. 2010;71(8):1025-32. [Crossref] [PubMed]
21. Waldrop AE, Hanson RF, Resnick HS, Kilpatrick DG, Naugle AE, Saunders BE. Risk factors for suicidal behavior among a national sample of adolescents: implications for prevention. J Trauma Stress. 2007;20(5):869-79. [Crossref] [PubMed]
22. Farrell C, Zimmerman GM. Violent lives: pathways linking exposure to violence to suicidal behavior in a national sample. Arch Suicide Res. 2019;23(1):100-21. [Crossref] [PubMed]
23. Lambert SF, Copeland-Linder N, Ialongo NS. Longitudinal associations between community violence exposure and suicidality. J Adolesc Health. 2008;43(4):380-6. [Crossref] [PubMed] [PMC]
24. O'Donnell L, O'Donnell C, Wardlaw DM, Stueve A. Risk and resiliency factors influencing suicidality among urban African American and Latino youth. Am J Community Psychol. 2004;33(1-2):37-49. [Crossref] [PubMed]

25. Belshaw SH, Siddique JA, Tanner J, Osho GS. The relationship between dating violence and suicidal behaviors in a national sample of adolescents. Violence Vict. 2012;27(4):580-91. [Crossref] [PubMed]

26. Flannery DJ, Singer MI, Wester K. Violence exposure, psychological trauma, and suicide risk in a community sample of dangerously violent adolescents. J Am Acad Child Adolesc Psychiatry. 2001;40(4):435-42. [Crossref] [PubMed]

27. Başoğlu M, Şalcıoğlu E. A Mental Healthcare Model for Mass Trauma Survivors: Control-Focused Behavioral Treatment of Earthquake, War, and Torture Trauma. 1st ed. Cambridge, UK: Cambridge University Press; 2011. [Crossref]

28. George D, Mallery M. SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update. 10th ed. Boston: Pearson; 2010.

29. Fegert JM, Vitiello B, Plener PL, Clemens V. Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. Child Adolesc Psychiatry Ment Health. 2020;14:20. [Crossref] [PubMed] [PMC]

30. Wu Z, Liu Z, Zou Z, Wang F, Zhu M, Zhang W, et al. Changes of psychotic-like experiences and their association with anxiety/depression among young adolescents before COVID-19 and after the lockdown in China. Schizophr Res. 2021;237:40-6. [Crossref] [PubMed] [PMC]

31. Salari N, Hosseinian-Far A, Jalali R, Vaisi-Raygani A, Rasoulpoor S, Mohammadi M, et al. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. Global Health. 2020;16(1):57. [Crossref] [PubMed] [PMC]

32. Racine N, McArthur BA, Cooke JE, Eirich R, Zhu J, Madigan S. Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. JAMA Pediatr. 2021;175(11):1142-50. [Crossref] [PubMed] [PMC]

33. Holmes EA, O'Connor RC, Perry VH, Tracey I, Wessely S, Arseneault L, et al. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. Lancet Psychiatry. 2020;7(6):547-60. [Crossref] [PubMed] [PMC]

34. Gratz KL, Tull MT, Richmond JR, Edmonds KA, Scamaldo KM, Rose JP. Thwarted belongingness and perceived burdensomeness explain the associations of COVID-19 social and economic consequences to suicide risk. Suicide Life Threat Behav. 2020;50(6):1140-8. [Crossref] [PubMed] [PMC]

35. Miller AB, Esposito-Smythers C, Leichtweis RN. Role of social support in adolescent suicidal ideation and suicide attempts. J Adolesc Health. 2015;56(3):286-92. [Crossref] [PubMed]