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The mental health of students learning online is a critical task for many countries around the globe. The research purpose was to analyse the factors affecting the quality of mental health of young individuals who learnt under conditions of not total lockdowns but adaptive quarantine restrictions. The research involved 186 volunteers from Zhengzhou University of Technology, 94 were first-year students, and 92 were fourth-year students. The experimental group involved first-year students, and the control group involved fourth-year students. An average age of the participants in the experimental group was 18.3 years, and in the control group, the average age was 22.4 years. The scholars conducted the research after four months of distance learning under the adaptive quarantine. The students could be involved in their usual entertainment activities and interpersonal communication outside the home. The Behavioural Health Measure, better known as BHM-20, was the core psychometric tool. The research finds that distance learning is less effective for first-year students than for fourth-year students because the former cannot effectively adapt and communicate in a new social environment, and develop trusting interpersonal relationships with fellow students and teachers. The research results coincide with other research on this issue and demonstrate a low degree of mental resilience during and after the pandemic. Previous research is not suitable for the analysis of the mental health of students under adaptive quarantine, including the freshmen, considered the most vulnerable group. The article will be useful for professionals interested in distance education in higher educational institutions, workers of socio-psychological services at universities or individuals involved in adapting curriculum materials for distance learning.Keywords: Distance learning, Mental health, Pandemic, Psychological well-beingThe COVID-19 pandemic has had a great impact on the mental health and well-being of individuals around the world. While some citizens successfully adapted to the reality of the pandemic and societal lockdowns, others have suffered from mental health disorders caused by a new infection (Serdakova et al., 2023).Moreover, access to mental health services has been severely impeded which had an impact on the mental health of individuals and significantly increased the risk of suicide (Gunnell et al., 2020). Most countries on different continents have introduced immediate and drastic protective measures in the fight against the spread of infection, such as closed borders, forced isolation, quarantine restrictions, and distance learning. On the one hand, the virtualization of the educational environment and distance education have reduced inequalities in poor rural regions and ensured equitable access to the education of the population. On the other hand, social isolation in the midst of the COVID-19 pandemic required a unique educational environment but it has caused an increased number of psychological disorders around the world and mental illnesses, including depression, obsessive-compulsive disorder, long-term episodes of counterproductive anxiety, and others (Clemente-Surez et al., 2021). The unexpected shift from in-person to online learning has created a lot of problems for students, teachers, and administrators because many years distance learning has not been very popular in schools and universities (Brown & Carreno-Davidson, 2020). At the same time, protecting the mental health of students is vital for higher education because cognitive abilities directly depend on the psychological state of the student, which affects academic motivation, the level of aspirations, involvement in learning, and the emotional and volitional spheres.As a stage of ontogenesis (human development), higher education may cause exacerbate mental health problems. Before the pandemic, research has primarily focused on student group relationships and campus living as the most common stress factors among students (Davis et al., 2021). The research finds that distance learning students report psychological problems more frequently than face-to-face learners, and it is important to analyse the factors that influence mental well-being in distance learning and help to focus on the problem identification related to the transformation of the face-to-face classroom to a virtual environment. The research is important for educators because the COVID-19 infection has not yet been completely defeated, and distance learning is already seen not only as a necessary measure but also as a way to simplify access to education around the world and in China in particular.Since the first cases of COVID-19 were detected, countries authorities have tried to find possible measures and ways to fight the pandemic around the world. Face-to-face and autonomous learning systems were replaced by distance learning platforms, and it became a significant factor of mental tension while adapting to new conditions in all areas of life and influenced by inadequate communication at the interpersonal level.Distance or online learning is the method which helps to prevent the spread of COVID-19, but it has a negative impact on the mental health of higher education students. The main problems experienced by students include anxiety, mild and severe stress, social media fatigue, and depression. At the same time, the symptoms are not always caused by mental health problems (Grigorkevich et al., 2022).The literature analysis revealed the impact of distance learning on the mental health of students and showed that the most sensitive aspects included inadequate time management, the lack of a full-fledged adaptation strategy, the development of digital technologies in a new way, the burden to ensure the quality of new material learning, as well as concerns about the impossibility of funding educational activities under the COVID-19 conditions (Aditya & Ulya, 2021).Some scholars have focused on fear as an emotional response of teachers and students to the distance learning model. The research confirmed that COVID-19 as a global social phenomenon increased the feeling of fear in different areas of life. First of all, it is the fear of being isolated from the family, the fear of academic failure, and the fear of losing social relationships (Al-Maroof et al., 2020). At the same time, modern online learning differs significantly from emergency distance learning, influenced by the mental tension decrease, in which addiction as a form of adaptation plays an important role. Under the pandemic restrictions and conditions, universities will adopt mixed or blended formats, since the problems of distance education are turned into educational opportunities. Distance learning allows easy access to education, development of different forms and methods of control, and adaptation and revision of inadequate university programmes (Adedoyin & Soykan, 2020).The mental health of teachers is a part of the discussion devoted to the ecological environment of distance education. A sample of Pakistani and Malaysian teachers was used to analyse the parameters such as teacher self-efficacy and the quality of distance education. The research found that the mental well-being of teachers was a significant factor in ensuring academic success (Guoyan et al., 2021).In Germany, scholars discuss the importance of psychological assistance provided by educational institutions during the crisis at the initial and final stages of distance learning. The attention of the German sociological and psychological services is on the well-being of students and burnout caused by nervous breakdown or inability to continue effective training under the COVID-19 restrictions.In Germany, mental illness prevention strategies are introduced for first-year students who find it difficult to move into a new social environment despite the distance format. The transition to a new environment causes a high-stress level due to psychological tension, anxiety and increased learning requirements compared to previous school years.An academic overload and a low level of knowledge among first-year students lead to learning problems, especially in specialised disciplines. Moreover, social and psychological aspects are important, such as mental exhaustion at the stage of admission, the development of new interpersonal relationships, and getting used to the university system of education and assessment (Schindler et al., 2021).The factors mentioned above suggest that education during the first year of study based on the distance learning system can be more difficult for students in a situation when one problem is replaced by another. Cross-sectional research on the mental well-being of European students during the first wave of COVID-19 in May 2020 found that all university students (regardless of the year of study) had poorer mental health than before the pandemic. However, the mental health variable correlated with the belief (irrational belief) that the national government ensured effective management of the epidemic at the municipal level and reduced the risks of infection and negative macroeconomic outcomes (Allen et al., 2022).The spread of the virus, long-term preventive measures and changes in daily routine have led to psychological problems such as anxiety, confusion, social deprivation, and depression. The chronic stress caused by the ongoing pandemic has a profound impact on a sharp and sustained decline of the psychological support that helped individuals cope with failure, emotional problems, disappointment, frustration, and preventing negative emotional experiences, namely resilience, optimism, psychological flexibility, and social relationships (Moro et al., 2021). In China, the effectiveness of psychosocial support and the impact of COVID-19-related stressors on mental health have been investigated.In Chinese realities, the concept of Psychosocial Support means family and social support in construct to Europe where it involves socio-psychological services.Moreover, the assessment of the mental health of the respondents was based on the symptoms of depression and loneliness.The scholars considered that the authorities should focus on the stress that followed the pandemic, as a serious threat to life and well-being, and the risk of infection with new and poorly researched diseases. However, the fear of infection as an independent variable was not correlated with either loneliness or depression, leading to heated debates about the impact of the pandemic on human mental health and well-being (Wang et al., 2022).The COVID-19 pandemic has led to higher rates of mental disorders among the Chinese population. Many individuals have experienced increased resilience during the pandemic as a post-crisis change which had a positive impact not only on the population but on the healthcare system in the country (Zhang, 2022).Restrictive measures under the quarantine have no impact on the cognitive performance of the population on different continents. However, complaints about cognitive decline increased significantly during the pandemic. High quality of life before the period of social isolation is the main factor that influences psychological disability, such as depression, anxiety, low-stress tolerance, ineffective self-regulation, and cognitive complaints (Nogueira et al., 2022). Reducing the negative consequences is important for young people in higher education during distance learning.Only a limited number of publications covered the mental health of students during distance learning and discussed the problems faced by the post-COVID societies. This issue is of particular importance if the governments do not consider distance learning as a vital point and the only possible preventive measure against the spread of a deadly disease. The research purpose is to assess the psychological health of students learning online and investigate the factors that affect the mental health of students. Many scholars analyse the behaviour and psychological problems of schoolchildren, their parents and schoolteachers, paying less attention to the university environment.This article considers age as the main factor to assess the opportunities and effectiveness of distance education for promoting the mental health of Chinese students in higher education. New experimental data will strengthen the debates about the opportunities promised by online education. After the weakening of quarantine measures, distance learning was no longer mandatory. This fact allowed the scholars to consider distance learning as an alternative form of education for the adult Chinese population who have already mastered social skills at earlier stages of ontogenesis and have maintained working, friendly, and romantic relationships with other people.The scholars will complete the following tasks, such as identify the most appropriate psychometric tools to assess the quality of the students mental health learning remotely under weak isolation conditions; identify a sample size of first-year and fourth-year students to compare the mental health of those who entered the university and those who had experience learning online in a higher educational institution. Moreover, the research will compare the statistical data of two groups and test the null hypothesis. In this article, mental health is evaluated under conditions of adaptive quarantine, during which students have access to mobility, interpersonal communication outside their home, and quality leisure activities, which become possible due to mass vaccination and economic feasibility.The BHM-20 methodology can help to assess mental health and the psychotherapy progress used as the main diagnostic tool (Kopta et al., 2015). This technique is a 20-item questionnaire that evaluates three components of healthy behaviour: well-being (stress, life satisfaction, and motivation); psychological symptoms (depression, anxiety, panic disorder, mood changes caused by bipolar disorder, eating disorder, substance abuse, suicide intentions, and risk of violence); life activities (work and study, intimate relationships, social relationships, and enjoyment of life).The full technique name is Behavioural Health Measure often used in a short form BHM. This technique can be used remotely without the direct participation of a psychologist because the respondent can insert answers using a computer or gadget, and the average time to complete the questionnaire is about three minutes. This tool is used in behavioural health clinics of primary health care (Bryan et al., 2014). The test consists of 20 statements rated by respondents where 0 points mean Strongly Disagree and 4 points represent Strong Agree.The maximum total score of psychological well-being, without the suicidal scale, is 80 points, and the minimum score is 0 points, which means deep mental exhaustion. The scales do not have a separate gradation, and it means that the scale showed the overall score of mental health. Moreover, BHM-20 allows additional screening of suicidal thoughts and impulses, and it is considered six times better to identify suicidal intentions in primary care than the standard interview method. However, the research does not make use of this method, because it is secondary in importance to clinical psychological care.In many cases, BHM-20 is used for primary psychological counselling at a certain number of higher education institutions, including Harvard University, the University of Minnesota, Indiana University, the University of Florida, and others, making this psychometric tool effective for data analysis. The tool is appropriate for adults aged 18+with normal or high intelligence (Bryan et al., 2014). Express methods with a high level of reliability exist in modern methodology including BHQ-20 (Behavioural Health Questionnaire) with similar scales. The techniques reliability was evaluated using four samples of different age groups, showing high results during the initial testing. Moreover, the high correlation between the scales in the BHQ-20 method indicated the presence of 1 key parameter of mental health. The analysis finds that the BHQ-20 is a reliable and valid mental health questionnaire, even though the number of questions is small (Kopta & Lowry, 2002).The experimental group of first-year students included 94 individuals (38 females and 56 males) aged 18 to 19 years interested in this research. The control group of fourth-year students consisted of 92 individuals (48 females and 44 males) aged 21 to 23 years. All respondents had prior distance learning experience because the experiment was conducted during the second half of the academic year when both groups learnt for four months under adaptive quarantine. The distance learning experience differed across groups because for first-year students it was similar to their school experience while the control group actually continued professionalization, first under conditions of total quarantine, and then under conditions of adaptive quarantine.This research was easy to organise and manage because it was conducted remotely and involved first-year and fourth-year volunteers of Zhengzhou University of Technology. The respondents received instructions in real time and proceeded to complete the electronic questionnaires on the Google platform at the agreed time on their personal computers. The preliminary briefing was conducted in the format of an online conference on ZOOM. The results were sent directly to the experimenters computer, entered into a common table, processed, and also remained anonymous. Although the participants logged in via e-mail in a Google form. In fact, the Google form presented to the respondents repeated the questions from BHM-20, greatly simplified the collection and processing of data. The well-structured methodology supported the high motivation level among the participants, immersed in the psycho-diagnostic process. The students were not informed about the research objective, which was the impact of distance learning on the mental health of young individuals. It helped the scholars to ensure the experiments purity and avoid bias. Moreover, all respondents could review the methodology results. The primary data processing did not take much time and the experimenter move quickly to statistical analysis.Data processing was carried out using the SPSS Statistics 22 programme. To test the research hypothesis, the popular nonparametric Mann-Whitney U-test for independent samples was used. It helped to assess the statistical homogeneity of the two samples and ensured the significant differences.The research had several limitations. First, the BHM-20 is a fast test without subscales. Second, the single-item suicide risk scale was not used in this experiment because this factor is usually used for the pre-responses analysis only. Third, the mental development of first-year and fourth-year students differs due to age differences and life experience, which can affect the level of mental health. Fourth, the BHM-20 method, considered an individualised one, does not have any gradations of Mental Health Normality, which limits the possibility of using this psychometric tool for large-scale research. Fifth, both samples involved volunteers only. The research did not capture the required social section of the population. Sixth, the BHM-20 was originally developed to assess the progress of individual psychotherapeutic performance. It heats the debates about the lack of standardised tests to assess the overall mental health of an individual. Tests without subscales would simplify the assessment of the impact of distance education on the mental health of Chinese youth.The unprecedented nature of this pandemic has caused several risk factors and events not explored in this research. The overall physical health, physical training, domestic abuse, violence, and mental health problems experienced by individuals caused by the pandemic were not examined. All indicators used in this research are self-reported, so the scholars consider that some respondents may be apt to provide truthful or false answers, which therefore could influence negatively the results.This experiment was based on high ethical standards because both samples involved volunteers and their identity was kept anonymous. Some students received feedback from the researcher on an individual basis. The experiment goals were not disclosed to the participants. The students were informed about some goals without going into detail including information about voluntary mental health monitoring. The experimenter did not benefit from the research and all the financial expenses were covered by Zhengzhou University of Technology.The research usefulness function was realised in full because distance learning under adaptive quarantine was introduced not only in China but in Europe. This is an important factor because the pandemic has not yet been completely defeated despite the mass vaccination programmes. The use of distance learning in higher education institutions, considering mental health, has been still questioned. The research finds drawbacks in policy development especially when distance learning is proposed for first-year students who integrate into a new social environment and acquire new skills and master knowledge.This scientific discussion is of exceptional social significance, allowing academic institutions to balance live communication in the classroom and the mental health of students who experienced an academic overload. There was no risk to the physical and mental health of freshmen. Moreover, monitoring was used as a self-report measure and forced respondents to pay attention to their mental health and analyse their overall mental conditions over the past two weeks.The results processing started with the analysis of the mean values for groups, which made it possible to produce high-quality primary research. At this stage, significant differences between the groups were manifested. Significant differences were found in the median of grouped data, and minimum and maximum values. So, the average value in the experimental group of first-year students was 35.14 points out of 80 possible points, while in the control group of fourth-year students this indicator was higher and reached 52.66 points. The data is available in Table1.BHM/SampleMean valueNStandard DeviationMinimumMaximumMedian of grouped dataFirst-year students35.149414.007106137.40Fourth-year students52.669212.867337450.25If the minimum value of the BHM index in the group of first-year students is 10 points, then in the control group it is already 33 points. The difference illustrates the high vulnerability level of former school students and a need for adaptation and effective use of psychological resources during the transition period, from one social environment to another. At the same time, the maximum intragroup values are similar. In the experimental group, the BHM score did not exceed 61 points, while in the control group, the highest value was 74 points out of 80 points. The standard deviation is lower in the group of fourth-year students, which suggests a higher homogeneity in the assessment of psychological well-being.It proves the significance of the socio-psychological services at the stage of adaptation of first-year students so that the students can receive professional support and focus on the educational process. These strategies should be introduced into practice under adaptive quarantine. For example, one of the possible interventions is support groups organised once a week and conducted by a professional psychologist online.The second stage of data processing involved a comparison of samples to identify the statistical differences. The classical Mann-Whitney U-test for independent samples was used. The analysis revealed that there were statistically significant differences between the groups. The data are available in Table2.Secondary Statistical AnalysisSampleNAverage ratingTotal ratingMann-Whitney U-testZAsymptotic Significance(2-sided mean)BHMFirst-year students9465.916195.50Fourth-year students92121.6911195.501861730.500-7.0670.000The results reveal that the integrated value of BHM in the groups of first-year and fourth-year students is significantly different because an extremely low level of statistical error was detected, namely - p=0.000 with admissible p=0.05. This result suggests that the psychological well-being of fourth-year students is more stable compared to first-year students. The research considers that distance learning is not the only factor affecting the mental health of the respondents from the experimental group. The scholars assumed that psychological problems experienced by students were caused by many factors including adaptation processes to distance learning, personality crises and academic overload. The results showed that distance learning for first-year students was less desirable than for the fourth-year respondents. It is difficult for the socio-psychological service workers to support students and provide psychological help online, detect emotional burnout, apathy, and depressive episodes in a distance learning format. This research showed that age and the year of study significantly affected the mental health of students learning online.Empirical research in South Africa illustrated that university professors failed to deliver adequate psychological support to isolated students. Students relied heavily on the support of both the administrative and academic staff when it came to the learning process. As a result, the high work stress felt by teachers was added to the high academic stress of students, which increased the risk of emotional burnout and nervous exhaustion in both groups (Poalses & Bezuidenhout, 2018).Distance learning sabotage denial to accept a new academic environment increases the likelihood of mental disorders and reduces the cognitive abilities of schoolchildren whose parents are against this form of teaching (Davis et al., 2021). Distance learning under total lockdowns can cause a sense of learned helplessness with online learning technology, and worsen the quality of mental health of students of different age groups. The factors that may eliminate the negative consequences are academic motivation, reduced fatigue and a loss of interaction that cannot be restored with any online conferences (Garcia et al., 2021).The U.S.-based University conducted a multi-thousand online survey involving undergraduate and graduate students based on standardised scales for assessing physical health and anxiety, as well as additional multiple-choice questions and open-ended questions about stressors and coping mechanisms under the pandemic restrictions. The results showed that half of the respondents experienced an increased level of depression and anxiety. At the same time, less than half of the participants indicated that they coped effectively with the stress factors caused by online learning and the threat of infection (Wang et al., 2020).In Malaysia, the mental health of students during distance learning was evaluated using the DASS-21 methodology, designed to assess the depressive-anxiety stress factors. The questionnaire analysis showed that 30% of students in vocational schools experienced severe or extremely severe depression, 41% had anxiety, and 20% had chronic stress. At the same time, the biological sex of the respondent had a significant impact on anxiety. The research suggests investigating and combining distance learning with face-to-face education and practical work experience within the curriculum (Ahmad et al., 2022).The results comparison of the mental state of students in full-time and distance learning was performed in Eurasia. This research assessed satisfaction with academic performance and the severity of depression and anxiety symptoms. The results showed that the prevalence of depressive symptoms and anxiety among students was higher during distance learning, compared with similar results obtained during full-time education. Moreover, the research results showed that the sudden transition from one learning environment to another was a major cause of chronic stress, which led to a high prevalence of depressive symptoms and anxiety among students (Lyubetsky et al., 2021).In Italy, the impact of long-term online learning on the mental health of students was also researched. The second (control) experiment used the same sample and conducted the research over six months. The results reveal significant differences on scales such as students connection with other students and teachers, workspace organisation, and boredom between lessons. Moreover, the results show significant correlations between student academic development and the quality of distance learning, course adaptation, workspace arrangements and communication with other students and teachers, and between students emotions and communication with other students and teachers (Balt-Salvador et al., 2021). The research finds that the social relations in distance learning can be an additional psychological resource for students that should not be underestimated.Cross-cultural research based on a sample of thousands of students showed higher rates of depression, suicidal intentions and post-traumatic stress disorder compared to pre-pandemic levels and current rates in individuals belonging to ethnic minorities, which could also be considered as one of the factors of influence. Though the most common pandemic outcome is PTSD (Post-traumatic stress disorder), recorded in 62% of the respondents. However, neither age, nor personal history of mental illness, nor perceived social support was a significant risk factor of mental health (Torres et al., 2022).The UK has developed a large-scale online questionnaire designed to assess mental health under the pandemic restrictions. The authors of the questionnaire considered socio-demographic variables, previous physical or mental illness, personal experience with COVID-19, information in the media, pandemic concerns, degree of personal traumatic experiences, PTSD caused by a pandemic outbreak, generalised anxiety disorder, depressive disorder, sleep quality, emotional deregulation, loneliness, social support, and the meaning of life (Armour et al., 2021). This questionnaire has not yet been standardised and adapted in other countries. However, all of the above factors affect the quality of mental health during and after the pandemic. There were no publications devoted to mental health under adaptive quarantine, which proved the need to start a debate on the key theoretical and empirical questions.This article investigated the main factors that affected the mental health of students. The theory of intelligence helps to illustrate that the pandemic and distance education increase the risk of clinical depression, generalised anxiety disorder, PTSD, apathy, learned helplessness, burnout, nervous breakdown, and so on. Furthermore, non-university students more often report mental health problems than those who learn academic disciplines in a traditional format. The results prove that therapeutic and individualistic approaches to mental health cannot be the only methods used to improve students mental well-being.The scholars have to investigate inclusive curriculum design and assessment methods. Moreover, educational institutions should introduce and teach advanced telecommuting skills, implement educational systems and processes that do not cause stress, and design learning environments based on professional feedback to maintain a balance between quality education and the students mental health. The research proposed the holistic approach to introduce mental health practices during distance learning that can influence positively the mental well-being of students. At an empirical level, the present research investigates distance learning opportunities during adaptive quarantine and finds that it is less effective for first-year students who have just entered the university. The problems that may arise are caused by the complicated adaptation process which requires a significant amount of effort, the difficulties in developing new social relations with teachers and fellow students, and academic overload, especially in learning specialised disciplines.The experiment shows that first-year students are a more vulnerable group than fourth-year students who have learnt online at the university and feel much more competent when it comes to university education. In addition, the research finds that first-year students need high-quality psychological support being at risk with a reduced tolerance for uncertainty. The empirical research finds that age and the year of study affect the mental well-being of students. The scholars suggest that under conditions of adaptive quarantine, it is necessary to pay attention to psychological screening and psychological interventions to prevent depressive episodes, apathy, low academic motivation, low-stress resistance, ineffective self-regulation, and so on. The scientific value of the research is that it causes a worldwide discussion about the safety of distance education and its impact on the mental health of university students.Moreover, some risks for mental health may occur when young individuals learn remotely. However, the research proves that the psychological states of undergraduate students are more stable and the students are better prepared for distance learning. This is the main practical value of the article to the university administration and teachers. This research manifests that the quality of socio-psychological services in universities is a priority for the administration, and special strategies should be developed to prevent mental disorders among students and maintain an effective and advantageous learning environment for all parties involved in the education process.No funding was received to assist with the preparation of this manuscript.The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.There are no competing interests to declare that are relevant to the content of this article.The study was conducted in accordance with the ethical principles approved by the Ethics Committee of Zhengzhou University of Technology.All participants gave their written informed consent.Adedoyin, O. B., & Soykan, E. (2020). 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Current Psychology, in press. 10.1007/s12144-021-02624-4 [DOI] [PMC free article] [PubMed]This section collects any data citations, data availability statements, or supplementary materials included in this article.The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.Articles from Education and Information Technologies are provided here courtesy of Nature Publishing Group Before COVID hit, Professor Stephanie Jones and Lecturer Emily Hanno were already tracking young children's development as part of the Early Learning Study at Harvard. As the pandemic began unfolding, they started to see shifts among the thousands of families and children participating in the study.In their newest findings, they share thatfamilies reported a rise in temper tantrums, anxiety, and a poor ability to manage emotions, especially among the young elementary-aged children during remote learning. These findings may not come as a surprise to the many families who endured remote learning with their children, however, Jones and Hanno say these experiences remain important now, even as we inch toward a possible endemic.We have to be ready to support children as they transition between these different things these different modalities, these different experiencesand support adults in kind of learning about enacting strategies that support children as they navigate the changes, Jones says. Those are things that we know about ... from work in social and emotional learning, in supporting positive behaviors, and supporting the wellbeing of adults.In this episode of the Harvard EdCast, they talk about how educators and families need to invest in social-emotional learning before learning loss or lost classroom time. They share ways to support educators facilitating classroom experiences for children that allow them to process the experiences they've had. They also offer easy strategies for families to check in with their young children's wellbeing.TRANSCRIPT:Jill Anderson: I'm Jill Anderson. This is The Harvard EdCast.Harvard Professor Stephanie Jones and lecturer Emily Hanno's recent study explored how remote learning negatively affected children's behavior. This probably doesn't come as a surprise to the many families and educators who endured remote learning, yet it was another piece for Stephanie and Emily in understanding children's wellbeing, and a cue for schools and families to embrace social and emotional learning. They had begun tracking children's development years ago, as part the Early Learning Study at Harvard. When the pandemic hit, they started to see a shift in wellbeing and behaviors among the elementary aged children and their families in the study. They say it's important now, more than ever, for parents and educators to pay attention to children and help them navigate their emotions. I wanted to hear more about this and strategies adults can use with kids. First, I asked Stephanie what made remote learning affect children so negatively.Stephanie Jones: I think it's a couple of things going on. What I don't think is that there's something about the screen itself. So the experience is remote learning, and I think it's association with some of these more challenging behaviors that parents observed, suggests that there's sort of a signal about what's going on generally for families and for children during the periods of time when remote learning is necessary. So I think it's a signal about the strain that families are under when remote learning has to happen, when those conditions are such that children have to be at home. For many parents, having a six or a seven year old at home on a screen learning while one is working and managing a household and doing all of the things that adults do, that is really very stressful. We know that strain is tied to challenging behavior among children.So I think the remote learning is more of a signal about the other kinds of things that are happening in families. The second thing is that I think it's hard for six and seven year olds to learn on a screen as their main modality for learning. It's hard. They have to learn how to do that, and that, of course, comes with all kinds of challenges. Sometimes when kids are struggling and they're frustrated, their behavior shifts. It can look more negative, more dysregulated, they fall apart more often. Emily, what do you think? These findings aren't necessarily going to be a surprise to anyone who's weathered remote learning with a child at home. So in some sense, this is meant to be confirmation of what many of us have suspected, that, yes, these are things that we're observing at scale on a more systematic way. Our hope is to draw attention to the fact that children's behaviors are shifting and that we may expect to see children coming back to school and behaving and operating in different ways than they did before the pandemic. So I think there's a risk of jumping immediately into trying to address learning loss or lost time in classrooms with children to focus on academic skills, but if we understand that children's behaviors have shifted in negative ways, we can support educators in facilitating classroom experiences for children that allow them to process the experiences that they've had, as well as support and scaffold behaviors in the classroom.Jill Anderson:Does this mean remote learning just needs to be taken off the table altogether?Stephanie Jones: I don't think that that's something that we can say, given that we are still in this situation, for sure. I think what these findings tell us is that we have to be ready for the challenges that come along with these various decisions. So for young kids, for kids who are six and seven years old, for adults, disruption can be really challenging. Changes to routines sets everybody off. Young children in particular, because they're just learning how to manage all the changes that are just part of life. So I don't think it means that remote learning is off the table, because that should be driven by public health considerations. I think what it does mean is that we have to be ready to support children as they transition between these different things, these different modalities, these different experiences, and support adults in kind of learning about enacting strategies that support children as they navigate the changes. Those are things that we know about from work forever, from work in social and emotional learning, in supporting positive behaviors, and supporting the wellbeing of adults. We have material we can draw upon to support kids and adults.Jill Anderson:So you're talking about strategies and things that can be done to manage some of these pivots. Can you talk about what that might look like for educators and parents?Stephanie Jones: There are lots of things. Some seem really sort of overly simple, and in their simpleness, they are profound. So asking children, asking adults how they're feeling. So, "What has it been like for you, as you went from being at school to being at home? How are you feeling as you're coming back to school? What is it like for you to go through this?" So just allowing some time and space for processing what's happened and the feelings that go along with it. We're really talking about how to support young children as they move between all these situations, but truly it's about the adults too, who need as much support and care as do the children. So one strategy is to really just open up space for processing and talking about how everyone's feeling, and it doesn't have to take a long time. It can be really quick, but it's really important. Emily Hanno:Another simple, yet profound strategy is routine. We know that children thrive with predictability and that's what's been so hard about this whole pandemic, is that we've had little ability to predict what's coming next and how long it's going to last. So both families and educators can support children's wellbeing by creating predictable routines that are going to happen no matter what's happening in the broader ecosystem of children's lives. So small things like family walks, consistent mealtime routines can really make a difference for children, and I think back to what Stephanie said, sometimes these more break-like or fun family routines can present space for children to have the sorts of open conversations about how they're doing. So while you're doing a puzzle together, or cooking dinner, those might be spaces where children feel most comfortable talking about how they're doing.Jill Anderson: A lot of these strategies sound like the things that we should just be doing in general, even whether the pandemic existed or not, right?Stephanie Jones:Yeah. One of the things that we've learned in this experience, and we certainly hear from educators and from parents increasingly about their interest in this field, which is that adults and children, the world of social, emotional, and behavioral wellbeing are really important, and these experiences have sort of made that ever clearer. There's lots of interest in strategies and supports for those areas in particular. So I would say, as someone who works in that area, I would say, "Yes. This is always important. Children really benefit from routines and it's always helpful to share how you feel. It builds relationships and it brings everyone into the space together." But right now, when we're facing these kinds of challenges, it is particularly important. As we get back into it, we address some of the real issues that we're facing, which is that children need some catch up, there are things to be learned and done.If we leave out a focus on the core social, emotional, and behavioral supports and skills, we'll struggle to address those other things. So we'll set ourselves back even more, and so taking time and thinking about how to bring children and adults back into a more regular routine of teaching and learning, and school, family and relationships, taking time to do that well and focusing on how people are feeling and what they've experienced is so important. It will help us in the long run, it'll move the other work forward faster.Jill Anderson:Is there really a resistance to it, or is it kind of a case of there's so much that people are trying to do and mitigate, that it kind of might be falling by the wayside? I'm talking about social and emotional learning.Stephanie Jones: I think that there is a great deal of belief and buy-in. I think when it comes down to the pressures of school and schooling, and the enormous challenges and pressures that educators are facing right now, it's hard to set aside time for these kinds of things because there's such a press to get back to normal, to get on with things. It's a tough moment and a conundrum. My advice is always, "Spending a little time here will accelerate your other efforts," because children and adults will feel more ready for it. So it's like, "Put time here," it feels like you're taking away from something else, but it will benefit the "something else" in the short and the long run.Jill Anderson:I know my own kid has a class every week, that I suspect is social and emotional learning, called Nexus, and she loves it.Stephanie Jones: Yeah.Jill Anderson: It's her favorite class. We don't know what the heck happens in there, but this isn't happening everywhere, I suspect.Stephanie Jones: It is varied, how it happens in different places. I think one thing you're highlighting that's so important, and something that we would all do well to remember, which is that children love to talk about how they feel and their relationships with others. It's a really important part of their life. It's what's in the front of their minds. You can take advantage of that and say, "Let's really think about how to support that. They're so engaged in that world. Let's think about how we can support that in other areas of instructional work." So let's bring in that interest in the social world, the emotional world, and see where it fits in these other instructional domains, because kids are really... They care about that stuff and they want to talk about it.Jill Anderson:It was fun when she brought the trigger sheet home and I was listed as one of her triggers, but that's okay.Stephanie Jones: All parents are a trigger.Jill Anderson: Dad didn't make it on there, but I did. I know I'm taking us way off course there, because I think a lot about social and emotional learning, and I ponder how much parents really know and understand about that.Stephanie Jones: Yeah. But just as you described, you see it in your relationship.Jill Anderson: Right.Stephanie Jones: Many parents feel it, it's intuitive, and sometimes it's not always clear from a kind of surfacing and explicit standby, like, "Which part of this is actually that social and emotional learning that they're talking about in school?" So making that connection sometimes doesn't happen, but in its core, it's really about forging connected, close, high quality relationships between adults and children, and children and children, and sort of in the whole ecosystem.Jill Anderson: To get us a little bit back onto the pandemic, talk a little bit about some of the changes in behavior that you were seeing in these studies among children.Emily Hanno: Just quickly to go back to Stephanie's point, I think one of the things that she's highlighting, and in our work together we've thought a lot about, is how do you integrate social and emotional learning into everything that you're doing in classrooms and at home? There's a potential hazard of thinking of social and emotional learning as having to be a specific learning block, or an hour a week, when in reality, it's happening every moment of every day that we're interacting with children and interacting with each other. One of the things that we've thought a lot about is how do you develop supports for families, supports for educators that allow them to integrate more explicitly social and emotional learning themes throughout the day when they're with children? Going back to your question around what behavioral changes we observe and parents observe, we saw that parents were reporting that their children's behavior tended to be more dysregulated when they were in remote learning.So they're having trouble putting the brakes on and switching between activities flexibly. We saw parents reporting that children were having more temper tantrums, and more anxious and removed behavior, so a whole slew of different types of behaviors. It doesn't mean every child that we learned about was experiencing these specific behaviors, but what it does indicate is that the response can look a lot of the different ways. It can be in more internalizing symptomatology, where children are a little bit withdrawn or quiet, or it can be in externalizing symptomatology where children's behaviors are really quite prevalent and you're observing it in a more dysregulated behaviors too. So we saw a diversity of responses.Stephanie Jones: So that's a good point, the diversity of responses to sort of challenge and disruption. We often get the question, from parents and from educators, "What should I notice and pay attention to?" Building on what Emily just described, it's really sort of a change in your child's behavior from what you're used to. So for some children, and even for adults, it can be this kind of drawing back or withdrawing, and for others, it can be a form of sort of falling apart, and yet others, it can be a form of kind of externalizing or acting out and responding to big emotions in big ways. So it's really the kind of shift that is the thing to look out for, and then, "How are you feeling? What's happening with you?", getting into a conversation about what's going on.Jill Anderson: It sounds like it's important for parents to carve out time every day to just sort of have these little check-ins, that that could be the most important thing to do.Stephanie Jones: As you said before, there are many of these things that are sort of great all the time, but especially when things really feel like they're tense and out of control, and having that little check-in can be the routine. So every day at this time, we're going to have our chat. We're going to sit together and hold hands, or it can be anything. We're going to sit with the stuffed animals and talk with them, find out how they're feeling during this unusual time. So there are lots of little strategies, little ways to check in with children, and I would say, again, with other adults, that just open up that place for sharing something that might be going on. Doing it in a regular way increases the likelihood that a child who is uncertain is going to share something. So it might not be the first time, "I'm feeling okay," but the next time, "Actually, it's kind of hard for me. I don't know what to do when I have to be on the screen. I'm nervous about that, or that makes me bored, or overly excited," or whatever it is.Emily Hanno: Some of these routines may feel unnatural at first, and making them part of daily behavior takes time to build the habit and to make it integrated into your normal everyday life. I would just underscore a theme that we've touched on over and over and over again, is that here, we're talking a lot about child wellbeing, but the adults' wellbeing, whether that's at home or at school, is so foundational to the child's wellbeing. Many of us have just been doing what we need to do to survive, to get through this current moment, but allowing and giving ourselves time to pause and think about how we're doing and how we might do more self care.Jill Anderson: We're in this really weird space in the pandemic right now where things aren't back to normal, but we're kind of pretending they're going to go back to normal. We don't know what the normal is anymore. Some of the work that you do explores the role of parents and caregivers modeling positive behavior through adversity. Why is that important, and what does that look like?Stephanie Jones: One of the primary ways that children learn how to manage their own experiences, their own emotions, their frustrations, their excitement, is by watching others do it. Children learn from the adult around them in every kind of way, and so how adults model their own management of stress and disruption is really important. That doesn't mean that it's terrible if an adult falls apart, that's a learning experience for a child too, which is that sometimes we fall apart and then we put ourselves back together. That's an important thing to see. A strategy for adults who really feel like they need a tool to manage some of those up and down kind of moments might be to do some out-loud self talk. So, "Gosh, I am feeling so frustrated right now because I can't get this computer to turn on. When I feel frustrated, I really want to hit the table, but I take a deep breath and I keep trying."So here I've just narrated something that happens to me all the time. I get frustrated by something and I want to fall apart, but I have to do something to help myself not fall apart. What we've found in our work is that young children are captivated by the internal world of adults. They don't hear about it all that often, and when they do, they really pay attention. So once an adult starts to sort of narrate their own internal world, those little ears are perking up and it can be really influential. So in a funny way, it's a way to do two things at once. It's a way for an adult to manage what's happening with themselves, self-talk can be a useful strategy, but also to model a way to manage for a young child who's having some trouble and listening closely.Emily Hanno: We also know that there can be cascades between how adults and children are doing. If an adult is feeling really stressed and frustrated, they can maybe respond more tersely to children, and that in turn feeds into the child's behavior, who's also responding shortly with their adult caregivers, and then that in turn exacerbates adults' behaviors and feelings as well. So I think it's important to understand that feedback loop between adult behavior and child be behavior, to be able to stop and see it happening, and then do something about it. As the adult, take a moment, stop, and address the burnout cascade.Jill Anderson: So what are you looking at now, and just what to keep in mind going forward?Emily Hanno: So we're continuing to follow these children for as long as they'll have us follow them, and our hope is to continue to understand how children's behavioral wellbeing and general wellbeing is shifting over time as we hopefully return to normalcy, so we understand whether or not these changes we've observed are enduring over time. The other thing that we're starting to do right now is to go back to our families and assess the children, not just in the areas of social and emotional learning, but also in more traditional academic areas, language development, literacy development, math skills, to understand whether or not we've also seen changes in those areas and how they align to changes in children's behavioral health. So is it that children whose behaviors have suffered more during the pandemic are also those that are struggling academically as well?Stephanie Jones: Yeah. Exactly. Overall, we're really interested in connecting children's experiences, families' experiences to their trajectories over time, across all sorts of areas. So we'll do that forever, as Emily said, if we can, and feed the information back to educators, to systems, to families.Jill Anderson: Thank you so much. I appreciate it.Stephanie Jones: Thank you.Emily Hanno: Thank you.Jill Anderson: Stephanie Jones is a professor at the Harvard Graduate School of Education and a faculty director of the Saul Zaentz Early Education Initiative. Emily Hanno is a postdoctoral researcher with the Saul Zaentz Early Education Initiative. She is also a lecturer at the Harvard Graduate School of Education. They are working on the Early Learning Study at Harvard, a population-based study that examines children's development in context of their early education and care. I'm Jill Anderson. This is The Harvard EdCast, produced by the Harvard Graduate School of Education. Thanks for listening. Updated and Fact-Checked July 2024 by: Mike Carter LCDC Update list: After the pandemic, the challenges were reduced a little bit but the approaches of online learning changed so we updated that. Updated coping skills. Added more insights as to how to take care of our teens mental health. Over the past few years, online learning has become a more popular option for school among teens and their families. Online school can be more convenient and flexible. It appeals to students, especially during unprecedented times like the past global COVID pandemic. This shift has allowed learning for students that may not be able to attend in-person school. However, it has also caused consequences that impact teen mental health. Online learning grew quickly after the COVID pandemic. When schools shut down, students had to adjust to a new way of learning that relied on technology and digital platforms. Tools like tablets, laptops, smartphones, learning softwares and digital classrooms like Zoom and Google Meet make it easier than ever to learn online. In virtual school, students can work at their own pace and education can be tailored to their specific levels. This can lead to a more personalized and engaging learning experience. While this shift was necessary for the health and safety of students and communities, it also comes with challenges. The quick transition to virtual schooling caused a number of changes for families, students and communities across the nation. On the positive side, online learning offers flexibility, tailored learning and access to more educational resources. However, it also brought new stressors on teens that could impact their mental health and emotional well-being. Online learning has led to less face-to-face interaction. For students who do not partake in extra curricular activities, this means they may go days without leaving home or interacting with peers. In a traditional classroom, students can engage in discussions, ask questions, and receive immediate feedback. This social aspect of learning helps build relationships, communication skills, and foster a sense of belonging. Without it, students may feel isolated and disconnected from their educational experience. Traditional classrooms also provide more structure and hold students accountable. With online learning, it is easier to become distracted. This can cause a decline in academic performance, cause students to fall behind and feel overwhelmed. The lack of social interaction can have psychological effects on teens. This period is important for social development, personality and identity exploration. Without interaction such as in regular school, teens can become isolated. This can impact their mental health and lead to problems such as depression or anxiety. However, it is important to note that not all students experience the same level of social isolation. Some teens may have a strong support system at home, with family members who actively engage with them and provide emotional support. Humans are social creatures, the absence of social interactions can be detrimental to mental and emotional well-being. The lack of opportunities to engage in group activities, make meaningful connections, and establish friendships can lead to feelings of isolation, which may exacerbate existing mental health issues or trigger the onset of new ones. When students have the opportunity to interact with their peers and teachers in person, they are more likely to feel motivated, engaged, and supported. Without these interpersonal connections, students may struggle to stay focused and may experience a decline in their academic performance. Substance Abuse Teenagers facing increased isolation, stress and anxiety due to the pressures of online learning may be more vulnerable to substance abuse. This unhealthy way of coping may be used as an escape or to increase focus and academic performance. At-Risk Teens Traditional schools can act as an escape for at-risk students. Some teens may have higher risks of developing mental health problems from online school if they do not have a safe or supportive home environment. Students that come from unstable family homes may find it harder to stay focused or emotionally present. Understanding the risks is helpful to prioritize mental health support in online education. This can include virtual counseling, support groups and mental health awareness programs. As online learning evolves, adults must focus on building a healthier digital learning environment. This can involve striking a balance between screen time and physical activity, promoting healthy coping mechanisms for stress reduction, and fostering supportive relationships between students, educators, and families

Effects of online school on mental health. Why online school is better for mental health.