# Cognitive Flexibility and Perceived Social Support as Predictors of Stress in Pandemic

## Pandemi Sürecinde Stres Düzeyinin Yordayıcıları Olarak Bilişsel Esneklik ve Algılanan Sosyal Destek

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## Özet

Bu çalışma, COVID-19 pandemisinde bilişsel esneklik, algılanan sosyal destek ve stres arasındaki ilişkiyi araştırmayı amaçlamaktadır. Araştırmanın örneklemi, 319 üniversite öğrencisinden oluşmaktadır. Katılımcıların %68'i (N=217) kadın, %32'si (N=102) erkektir. Veri toplamak için "Depresyon, Kaygı ve Stres Ölçeği", "Bilişsel Esneklik Envanteri", "Çok Boyutlu Algılanan Sosyal Destek Ölçeği" ve "Demografik Bilgi Formu" kullanılmıştır. İstatistiksel analizde Pearson moment-çarpım korelasyon analizi, tek yönlü ANOVA ve hiyerarşik regresyon analizinden yararlanılmıştır. Araştırmanın sonuçlarına göre, katılımcıların stres düzeyleri, pandemi sırasında yaşadıkları maddi gelirdeki düşüşe göre önemli ölçüde farklılık göstermiştir. Stres düzeyi ile yaş, algılanan sosyal destek ve bilişsel esneklik arasında negatif bir ilişki bulunmuştur. Ayrıca hiyerarşik regresyon analizi sonuçları, yaş, maddi gelirdeki azalma, pandeminin eğitim üzerindeki olumsuz etkisi kontrol edildiğinde, algılanan sosyal destek ve bilişsel esnekliğin stres düzeyini önemli ölçüde yordadığı sonucuna ulaşılmıştır. Çalışmanın çıkarımları açısından algılanan sosyal destek ve bilişsel esneklik arttıkça stres düzeyinin azaldığı tespit edilmiştir. Bu nedenle bilişsel esneklik becerilerinin nasıl geliştirileceğine ve algılanan sosyal desteğin artırılmasına yönelik yapılacak çalışmaların, COVID-19'un neden olduğu stresin ortadan kaldırılmasına katkı sağlayabileceği düşünülmüştür.

**Anahtar Sözcükler:** Algılanan Sosyal Destek, Bilişsel Esneklik, COVID-19, Stres, Üniversite Öğrencileri.

## Abstract

This study aims to examine the relationship between cognitive flexibility, perceived social support and stress in the COVID-19 pandemic. The sample consisted of 319 university students, of which 68% were female and 32% were male. "Depression, Anxiety and Stress Scale", "Cognitive Flexibility Inventory", "Multidimensional Scale of Perceived Social Support", and "Demographic Information Form" were used in data collection. The Pearson moment-product correlation analysis, one-way ANOVA, and hierarchical regression analysis were performed. The results of the study showed that the stress levels of the participants differ significantly according to the decrease in financial income they experienced during the pandemic. Stress level showed a negative correlation with age, perceived social support, and cognitive flexibility. In addition, hierarchical regression analysis showed that when age, the decrease in financial income, the negative impact of the pandemic on education were controlled, perceived social support and cognitive flexibility predicted stress level significantly. The study revealed that as cognitive flexibility and the perceived social support increase, the level of stress decreases. Consequently, studies on how to increase perceived social support and develop cognitive flexibility skills may contribute to eliminating the stress brought about by COVID-19.

**Keywords:** Cognitive Flexibility, COVID-19, Perceived Social Support, Stress, University Students.

## Pandemics

Pandemics are infectious outbreaks that can spread globally and affect millions of people, while epidemics are relatively smaller outbreaks that are localized to a few countries. Pandemics are usually a result of an emerging infectious disease, which means a disease that most people have no prior immunity to (Taylor, 2022). According to the World Health Organization, pandemics are "large-scale outbreaks that affect millions of people in more than one country and sometimes spread worldwide" (WHO, 2010).

Throughout history, there have been a number of pandemics that have had an impact on humanity. Some of the notable pandemics include the Black Plague (1346-1356), Russian flu (1889-1890), Spanish flu (1918-1920), the 1957 influenza pandemic (1957-1958), the 1968 influenza pandemic (1968-1969), HIV/AIDS (1981-present), severe acute respiratory syndrome (SARS; 2002-2004), Middle East respiratory syndrome (MERS; 2012-present), swine flu (2009-2010), and the Zika virus pandemic (2015-2016) (Taylor, 2022).

The most recent pandemic is the novel coronavirus (COVID-19) outbreak in Wuhan, China in December 2019, which spread rapidly outside China (World Health Organization (WHO, 2020).

## COVID-19 Pandemic

COVID-19, a type of acute respiratory syndrome, has caused severe cases resulting in serious physical discomfort and death and continues to have its adverse effects today. COVID-19, which spreads rapidly and very severely, was declared as a "pandemic" by the World Health Organization on March 11, 2020 (World Health Organization (WHO, 2020).

The COVID-19 pandemic shares psychological characteristics with previous pandemics. Such characteristics involve: the media's role in calming and alarming the public, heightened anxiety from the likelihood of infection transmission, increased spread of rumours and conspiracy theories, panic, surges in psychological problems - such as anxiety disorders, enforced social distancing, protests, and increased pro-social behaviour (Taylor, 2022).

Uncertainty is one of the primary stress factors associated with a pandemic. These uncertainties may include whether an outbreak will evolve into a pandemic, its severity, the availability and effectiveness of countermeasures, the pandemic's duration, the affected population, and its resolution. Moreover, disinformation and rumours in the media and other news sources exacerbate uncertainties during such times. To confront the challenges of a pandemic, individuals must exhibit resilience to uncertainties. The stress factors arising from the pandemic may cause psychological problems in individuals (Taylor, 2022).

## Negative Psychological Effects of Pandemics

In addition to the physiological effects, the pandemic also negatively affects people's economic, social and psychological lives, and the pandemic is a source of stress at the individual and social levels (Bilge & Bilge, 2020). The psychological effects of pandemics are greater than the somatic effects (Taylor, 2022). During these periods, there is an observed increase in post-traumatic stress disorder, obsessive-compulsive disorders, grief disorders, mood disorder and substance use (Taylor, 2022; Prati & Mancini 2021). For instance, during the Spanish flu outbreak, there was an increase in anxiety and depression related to the pandemic (Bristow, 2012).

Robillard et al. (2021) observed that some individuals who had not experienced anxiety or mood disorders previously developed symptoms of anxiety and depression as a result of the COVID-19 pandemic. The COVID-19 pandemic has caused psychological pressure in people around the world in addition to serious consequences especially the risk of death, and stress is one of the most crucial problems caused by this pandemic (Ye et al., 2020). Most people desire order, continuity, and predictability in their lives. It has been reported that positive or negative events that may lead to changes in their lives can cause stress in individuals (Morris & Maisto, 2001).

## Stress and Stress-Related Factors During Pandemic Period

Studies have also found that the COVID-19 pandemic gives rise to stress in individuals (Duan & Zhu, 2020; Göksu & Kumcağız, 2020; Ye et al., 2020; Wang et al., 2020). Stress is a problem that disrupts people's productivity, impairs their psychological functioning, and threatens their health (Barrow & Prosen, 1981). Morris and Maisto (2001) pointed out that events such as everyday problems, change, frustration, conflict, and pressure cause stress. Stress, which can lead to negative affection such as depression and anxiety, also causes behavioural and physiological responses that can later lead to health problems (Herbert & Cohen, 1994).

According to Tanhan (2020), the pandemic has a negative psychological impact on university students. A study conducted with university students found that increased stress during the pandemic directly predicted depression (Rodríguez-Hidalgo, Pantaleón, Dios & Falla, 2020). Students have experienced stress during the pandemic, including financial difficulties (Tanhan, 2020) and educational challenges (Maatuk et al., 2022).

One of the variables believed to reduce the negative effects of stress on individuals is cognitive flexibility (CF). The ability to adapt one's cognitions to varying environmental conditions is termed cognitive flexibility (CF) (Dennis & Vander Wal, 2010). Individuals with this ability are more likely to have balanced and harmonious thoughts than challenging and contradictory thoughts and find difficult situations easier to cope with (Gülüm & Dağ, 2012). CF also involves processing many pieces of information simultaneously, developing many ideas, considering alternatives, and designing plans to fit a particular context and situation (Anderson, 2002; Eslinger & Grattan, 1993). It has been determined that individuals with high CF have lower levels of stress (Demirtaş, 2019; Turan, Durgun, Kaya, Ertaş & Kuvan, 2019) and CF is important in coping with stress (Asıcı & İkiz, 2015).

Social support (SS) has been found to play a significant role in protecting individuals from the negative effects of stressful experiences (Cohen & Wills, 1985; Kessler, Price & Wortman, 1985), and SS has also been reported to contribute to the ability to cope with stress (Cohen, 1992; DeLongis & Holtzman, 2005). Perceived social support (PSS) refers to the support individuals expect from others when they need it (Cohen & Hoberman, 1983) and includes individuals' perceptions about how much support they can potentially receive from their social relationships, especially

from their family, friends, and significant others (Dour et al., 2014; Hupcey, 1998). PSS affects stress positively and directly (Panayiotou & Karekla, 2013). Psychological support from others during the pandemic has been found to have a protective effect against COVID-19 stress (Ye et al., 2020; Sommerlad et al. 2021). PSS was also found to be negatively correlated with the adverse mental health effects of the COVID-19 pandemic (Grey et al., 2020).

### The Theoretical Framework of the Research

This study is based on the stress model developed by Holmes and Rahe (1967). The model suggests that major life changes causing stress in individuals lead to increased disease rates. The pandemic period is characterized by various changes in the lives of individuals like mask mandates, social isolation, curfews, remote education, and travel restrictions, which make people more prone to stress-related diseases, as mentioned by Taylor (2019). Hence, identifying protective factors is essential for preventing negative psychological effects caused by increased stress during the pandemic period.

### Purpose of the Study

This study aims to investigate whether there is a correlation between the cognitive flexibility of university students and their perceived social support with the level of stress that they experience during the pandemic period. Furthermore, this study explores whether the decrease in financial income of students is associated with changes in their stress levels and whether it correlates with negative experiences in education.

## Method

### Participants and Procedure

The study consisted of 319 university students studying at universities in Türkiye. The sample group was determined by the convenience sampling method. Since it was impossible to collect face-to-face and random data because it was the beginning of the pandemic, this sampling method was preferred and the data were collected online between May and June 2020. 68% (N=217) of the participants were female and 32% (N=102) were male. The average age of the participants was 24.29.

### Ethical Statement

The permissions for the instruments to be used in the research were received from the developers. Subsequently, the necessary ethics committee approval was obtained from the Istanbul Aydın University Ethics Committee (File no: 2020/5). After getting the necessary permissions, data were collected from the students who voluntarily agreed to participate in the research through an online questionnaire.

### Instruments

**Depression, Anxiety and Stress Scale (DASS-21):** DASS-21, which measures individuals' stress, depression, and anxiety levels, was developed by Lovibond and Lovibond (1995). A 4-point Likert-type rating is used for the scale. The Turkish adaptation study of the scale was carried out by Yılmaz, Boz and Arslan (2017). Stress, depression and anxiety form the subscales of the scale. There are 7 items for each subscale and the scale consists of 21 items in total. Separate scoring is done for the subscales, and the total score is not taken. In this study, only the stress subscale was used. In the adaptation study, the Cronbach alpha value was found to be .76 for the stress subscale; in our study, it was calculated as .81 for the stress subscale.

**Cognitive Flexibility Inventory (CFI):** CFI, which measures individuals' ability to produce balanced, alternative, adaptive and appropriate thoughts in difficult circumstances, was developed by Dennis and Vander Wal (2010). A 5-point Likert-type rating is used for the scale. The scale's adaptation to Turkish was performed by Gülüm and Dağ (2012). CFI includes control and alternatives subscales. The scale consists of 20 items. In the adaptation study, the Cronbach alpha value of the scale was found as .90; in our study, it was calculated as .91.

**Multidimensional Scale of Perceived Social Support (MSPSS):** MSPSS, which measures individuals' PSS level, was developed by Zimet, Dahlem, Zimet and Farley (1988). A 5-point Likert-type rating is used for the scale. The Turkish adaptation study of the scale was conducted by Eker, Arkar and Yaldız, (2001). PSS from family, PSS from friends, and PSS from significant others form the subscales. In the adaptation study, the Cronbach alpha value of the scale was found as .89; in our study, it was calculated as .88.

**Demographic Information Form:** This form, prepared by the researchers, consists of four questions covering the participants' gender, age, financial situation during the pandemic and evaluations about the effects of the pandemic on education.

## Data Analysis

The stress levels of the participants in terms of the financial income loss during the pandemic were analysed by one-way ANOVA analysis. Pearson product-moment correlation analysis was used to analyse the relationships between stress levels, PSS, CF, age, and the negative impact of the pandemic on education. In addition, hierarchical regression analysis was performed to determine the predictive role of CF, PSS, and factors related to the pandemic on the stress levels.

**Table 1.** The comparison of the stress levels of the participants according to the decrease in financial income during the pandemic.

| Score | Group | n | x̄ | Sd | SV | SS | df | MS | F |
|---|---|---|---|---|---|---|---|---|---|
| The decrease in financial income | No | 137 | 13.20 | 5.55 | Between groups | 392.834 | 2 | 196.417 | 5.42* |
| | Yes, slightly | 133 | 15.11 | 6.39 | In-group | 11451.185 | 316 | 36.238 | |
| | Yes, too much | 49 | 16.02 | 6.26 | Total | 11844.019 | 318 | | |
| | Total | 319 | 14.43 | 6.10 | | | | | |

\* p<.01, Sd: Standard deviation, SV: Source of variance, SS: Sum of squares, MS: Mean of Squares.

## Results

One-way ANOVA analysis was conducted to determine whether the stress levels of the participants differed significantly according to the financial income loss they experienced during the pandemic. Table 1 involved results of the analysis.

Table 1 showed that the stress levels of the participants differ significantly according to the decrease in financial income they experienced during the pandemic ($F(2, 316)=$ 5.42, p<.01). The Post Hoc (Scheffe) Pairwise Comparisons Analysis, which was conducted to determine the source of the difference, revealed that the difference was caused by the participants who stated that there was no decrease in their financial income during the pandemic (p<.01). According to this; stress levels of the participants who stated that there was no decrease in their financial income during the pandemic (x̄=13.20, SS=5.55) were significantly lower than those who stated that they had a slight decrease in their financial income (x̄=15.11, SS=6.39) and those who stated that they had too much decrease in their financial income (x̄=16.02, SS=6.26) (p<.01). The effect size calculated as a result of the analysis ($\eta 2=.033$) shows that the difference is moderate.

The relationships between the stress levels of the participants during the pandemic and PSS, CF, age, and the negative impact of the pandemic on education were examined by Pearson product-moment correlation analysis (See Table.2).

Table 2 showed that there is a positive relationship between the stress levels of the participants during the pandemic and the negative impact of the pandemic on education (r=.184, p<.01). According to this; as the levels of the negative impact of the pandemic on education increase, their stress levels increase. On the other hand, the stress level of participants during the pandemic had a negative correlation with PSS (r=-.158, p<.01), CF (r=-.353, p<.01), and age (r=-.199, p<.01). According to this; as participants' PSS, CF, and age increase, their stress levels decrease. CF, PSS, and factors related to the pandemic, which predicted the stress levels of the participants during the pandemic, were examined by hierarchical regression analysis (See Table.3).

According to Table 3, the age included in the model in the first stage is a significant covariance variable ($F(1,317)=13.048$, p<.001, $R2=.040$, Radj2=.037). The unique contribution of the age variable (t=-3.612, p=.000, B=-.226) to the model is significant. In the second stage, the decrease in financial income during the pandemic, the negative impact of the pandemic on education, and PSS variables were included in the model, and the model was found to be significant ($F(4,314)=9.106$, p<.001, $R2=.104$, Radj2. =.093). The unique contributions of the decrease in financial income during the pandemic (t=2.800, p<.01, B=1.288), that of the negative impact of the pandemic on education (t=2.915, p<.05, B=.952) and that of PSS (t=-2.463, p<.05, B=-.049) to the model are significant. In the third stage, the CF variable was included in the model and the model was found to be significant ($F(5,313)=14.924$, p<.001, $R2=.193$, Radj2=.180). The unique contribution of the CF variable (t=-5.859, p=.000, B=-.160) to the model is significant.

**Table 2.** The correlations between the level of stress, PSS, CF, age, and the negative impact of the pandemic on education

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Level of stress | - | | | |
| 2. PSS | -.158** | - | | |
| 3. CF | -.353** | .348** | - | |
| 4. Age | -.199** | .163** | .208** | - |
| 5. The negative impact of the pandemic on education | .184** | .037 | -.015 | -.171** |

\*\*p<.01, CF: Cognitive flexibility, PSS: Perceived social support.

**Table 3.** Investigation of CF, PSS, and factors related to the pandemic that predict the stress levels of the participants during the pandemic.

| Variables | B | SE B | β | t | p | CI | | $R^2_{adj}$ | F |
|---|---|---|---|---|---|---|---|---|---|
| Model 1 | | | | | | | | .037 | 13.048* |
| Age | -.226 | .063 | -.199 | -3.612 | .000 | -.349 | -.103 | | |
| Model 2 | | | | | | | | .093 | 9.106* |
| Age | -.154 | .063 | -.135 | -2.449 | .015 | -.278 | -.030 | | |
| The decrease in financial income during the pandemic | 1.288 | .460 | .150 | 2.800 | .005 | .383 | 2.193 | | |
| The negative impact of the pandemic on education | .952 | .327 | .159 | 2.915 | .004 | .310 | 1.595 | | |
| PSS | -.049 | .020 | -.134 | -2.463 | .014 | -.089 | -.010 | | |
| Model 3 | | | | | | | | .180 | 14.924* |
| Age | -.096 | .061 | -.085 | -1.591 | .113 | -.215 | .023 | | |
| The decrease in financial income during the pandemic | 1.353 | .437 | .158 | 3.094 | .002 | .493 | 2.214 | | |
| The negative impact of the pandemic on education | .950 | .310 | .158 | 3.059 | .002 | .339 | 1.561 | | |
| PSS | -.011 | .020 | -.030 | -.545 | .586 | -.051 | .029 | | |
| CF | -.160 | .027 | -.322 | -5.859 | .000 | -.213 | -.106 | | |
| *p < .001, CF: Cognitive flexibility, PSS: Perceived social support. | | | | | | | | | |

## Discussion

Amidst the pandemic outbreak, individuals experience heightened levels of stress (Duan & Zhu, 2020; Göksu & Kumcağız, 2020: Ye et al., 2020; Wang et al., 2020). It is known to instigate adverse outcomes, including deterioration of psychological functioning, reduced productivity (Barrow & Prosen, 1981), reduced quality of life (Baltaş & Baltaş, 1990), and detrimental physiological and psychological impacts on health (Herbert & Cohen, 1994). University students are psychologically impacted and experience amplified stress levels during the pandemic outbreak (Rodríguez-Hidalgo et al., 2020; Tanhan, 2020). Several studies have analysed the effects of the pandemic period on university students (e.g., David et al., 2022). Risk factors and protective factors received general emphasis in these studies.

Holmes and Rahe's (1967) stress model suggests that major life changes leading to stress can increase an individual's risk of disease. Identifying protective factors is crucial in mitigating negative psychological effects arising from increased stress during the pandemic. Determining the risk and protective factors that impact pandemic-related negative psychological effects is essential. This study investigated whether university students' cognitive flexibility and perceived social support could predict the stress levels experienced during the pandemic period. The study also explored whether decreased financial income among students was linked to changes in stress levels, and whether these changes were related to negative experiences in education.

We first analysed whether the financial income decrease had an impact on the stress levels of the students. The results revealed that the stress levels of the participants who experienced a decrease in their financial income during the COVID-19 had higher stress levels. A study conducted with university students in Türkiye found that their financial resources were insufficient during the pandemic (Tanhan, 2020). The studies showed that the individuals who had financial strain reported higher stress levels during the COVID-19 pandemic (Carroll et al., 2020; Husky et al.,2020; Park et al.,2020) and it was found that financial concerns formed the most stressful life domain (Park et al., 2020). It was reported that disadvantages in financial status are one of the risk factors for mental health problems (Kivimäki et al., 2020) and low socio-economic status is related to behaviors that impair health causing stress (Baum et al., 1999).

After the COVID-19 pandemic, online education has been started in many countries in a short time. Among the college students, online education was considered stressful, and uncertain in terms of exams and assessments (Chakraborty, 2020) and it brought the fear of academic failure (Chandra, 2020). Also, a study reported that university students suffered from stress and worries about the quality of online learning, sufficient training, and communication with instructors (Maatuk et al., 2022; Yaghi, 2021). The study's findings demonstrate that pandemic-related disruptions to education elevate university students' stress levels. The results are consistent with prior literature.

However, a negative correlation was observed between the age of university students and their stress levels. In

other words, increasing age among university students is associated with lower stress levels. There is inconsistency in the literature regarding the correlation between age and stress levels among university students. Turan et al. (2019) observed that university students above the age of 20 have lower stress levels than those under 20. However, David et al. (2022) found no significant effect of age on stress levels among university students.

The study found a negative correlation between the participants' stress levels and PSS. Social support has a crucial role in protecting people against the adverse effects of stressful life events (Cohen & Wills, 1985; Kessler et al., 1985). PSS also has a positive and direct effect on stress (Panayiotou & Karekla, 2013). Moreover, it has been reported that psychological support provided by others during the COVID-19 pandemic has a protective effect against stress, and PSS is negatively related to the adverse impacts of the pandemic on psychological health (Ye et al., 2020; Grey et al., 2020). Two separate studies were conducted with Turkish university students, which showed that as their perceived social support increased, their perceived stress levels decreased (Polat & Dur, 2022; Taş, 2022). As can be seen, the findings obtained in terms of PSS in the literature are consistent with the result of this study.

In the study, a negative correlation was found between the level of stress and CF. Higher levels of CF were found negatively correlated with stress (Demirtaş, 2019; Turan et al., 2019). The results of the present study are consistent with the literature. A study conducted with nursing students in Türkiye found that perceived stress decreased as cognitive flexibility increased (Turan et al., 2019). In addition, it was found that CF and emotional distress showed a negative relationship (Johnco, Wuthrich & Rapee 2014). During the COVID-19, CF was found in positive relation to mental health (Selter & Curran, 2021; Wu et al., 2021). Also, the study conducted by Uysal Cantürk (2021) concluded that CF was positively correlated with functional coping strategies with stress. All of these results support the finding of this study.

The hierarchical regression analysis revealed that, after controlling for age, pandemic-related financial difficulties and negative effects of the pandemic on education, both perceived social support and cognitive flexibility significantly predicted the level of stress experienced by university students. Cognitive flexibility was found to make the largest specific contribution to the model. The inclusion of cognitive flexibility in the model resulted in the contribution of perceived social support becoming insignificant. The findings suggest that cognitive flexibility has a stress-reducing effect on university students during the pandemic. While the effect of perceived social support in reducing stress levels should not be overlooked, developing cognitive flexibility plays a greater role in

reducing stress levels. Therefore, intervention studies aimed at reducing stress levels of university students during pandemic periods should focus on not only providing social support but also carrying out activities to improve students' cognitive flexibility in order to increase the success of the intervention.

## Limitations

This study is limited by the fact that it only involved 319 university students from various universities in Türkiye and relied solely on the data collected by the instruments. Regarding gender distribution, there were more female participants in this study. Moreover, due to the cross-sectional nature of the research, it is challenging to establish causality. As the research data were collected only during May and June 2020, generalizing to the entire pandemic period is difficult.

## Implications

### Implications for Future Research

Stress levels in university students tend to increase during pandemic periods. Due to the negative psychological consequences of increased stress levels, research aimed at reducing stress levels is of great importance. Identifying the factors that increase and decrease stress levels during the pandemic period is the initial step in prevention studies. This study investigated the relationships between stress levels, perceived social support, and cognitive flexibility. In the future, identifying additional stressors that affect levels of stress during the pandemic period would be advantageous. Furthermore, developing preventive intervention programs may be beneficial in reducing individual stress levels. However, repeating this study with different sample groups and conducting longitudinal studies would be necessary to observe the long-term effects of the pandemic.

### Implications for Mental Health Professionals

The pandemic process has led to an increase in stress levels, resulting in the development of various psychological problems (Rodríguez-Hidalgo, Pantaleón, Dios & Falla, 2020). As cognitive flexibility has been found to reduce stress levels, it may be beneficial to provide interventions that improve cognitive flexibility to individuals experiencing stress-related psychological problems.

### Implications for Educators

The study suggests that difficulties faced during the pandemic education increase students' stress levels. In this regard, obtaining student feedback at regular intervals and taking corrective measures could help in reducing their stress levels. Moreover, incorporating activities to enhance

cognitive flexibility in the curriculum could help reduce stress levels, as suggested by the importance of cognitive flexibility. Likewise, recognizing the significance of social support in stress reduction, developing activities with peer groups or fostering social support among students could prove beneficial.

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There are no potential conflicts of interest declared by the researchers.

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