

## Emotional profile of learners in self-isolation period

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### ABSTRACT

The purpose of the study was to identify the main factors affecting the emotional state of students in self-isolation. The study was carried out surveys of students of L.N. Gumilyov Eurasian National University. As a result of the study, it was found that the COVID-19 pandemic significantly affected students, causing them stress, anxiety and loneliness due to forced self-isolation and transition to distance learning. The study found that strong family relationships, friend support, and lecturer attention positively impacted students' stress levels, loneliness, and emotional well-being. The conducted study also revealed that learning factors such as study load, ways of learning and degree of self-efficacy play an important role in students' emotional well-being. A survey of students revealed that they used various methods of emotional self-regulation such as meditation, breathing exercises, sports and creative activities.

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## 1. INTRODUCTION

The COVID-19 pandemic led to prolonged self-isolation that significantly impacted students' mental health and emotional stability. Analyzing students' emotional responses during this period is crucial for understanding how changes in daily life and learning environments influence their well-being. Analyzing the emotional profile allows assessing the levels of stress, anxiety, feelings of loneliness and life satisfaction of students in self-isolation. By understanding these aspects, it is possible to identify students' main problem areas and needs for support and help. This may include creating support programmed to improve students' mental health, providing psychological counselling to help students overcome emotional difficulties, and providing resources and tools to effectively manage stress and anxiety.

Key factors affecting students' emotional profiles include personal health, academic workload, and social support. In addition, external stressors, like economic instability and social restrictions, also play a role. Social interactions, such as relationships with classmates, professors, and friends, also have a significant impact on students' emotional well-being. A separate aspect is external factors such as the political environment, economic situation, or cultural changes that can also affect students' emotions. The difficulty lies in taking all these factors into account when analyzing the emotional profile and its changes over time.

Serdiuk *et al.* [1] identified serious gaps and insufficient readiness of students for this type of education. However, Tazhitova *et al.* [2] notes that innovative processes can successfully help students to learn and change their approach to traditional learning. It is important to study the changes in students' approach to traditional learning in the context of the introduction of distance learning. Wang *et al.* [3] note that the COVID-19 pandemic has led to increased levels of stress and depression in the community. Research

by Pramukti *et al.* [4] emphasizes the negative impact of the pandemic on the mental health of university students. In turn, Wood *et al.* [5] point out the profound impact of the pandemic on college students, especially on people with mental disorders who are more vulnerable. Kecojevic *et al.* [6] suggest that the COVID-19 pandemic was a period of difficulty for college students. Girmay and Singh [7] emphasize the fact that loneliness and social isolation can have a negative impact on both mental and physical health of an individual. Labrague *et al.* [8] note high levels of loneliness among students during the coronavirus pandemic. Furthermore, Vasileiou *et al.* [9] argues that strategies to combat loneliness should consider contextual constraints and opportunities, availability of social resources, and individual needs and resources. Phillips *et al.* [10] points to the fragmentation of the spaces in which students live and study, leading to disrupted social interactions and relationships. It is important to study the mechanisms of adaptation to social isolation, as well as the effectiveness of different strategies for coping with loneliness.

Son *et al.* [11] emphasize that the global pandemic has had a significant detrimental impact on the mental health of students in the United States, intensifying stress and anxiety as a result of the enforced isolation. Similarly, Tamura *et al.* [12] emphasize that a reduction in physical activity and a limitation of social interaction among Japanese students have had a detrimental impact on their emotional well-being. Dong and Bouey [13] discuss the public mental health crisis in China, establishing a correlation between pandemic-induced isolation and increased psychological distress. Kumar and Somani [14] also highlight the emergence of heightened anxiety and obsessive-compulsive behaviors during the pandemic, emphasizing the importance of effective coping strategies for students. Ács *et al.* [15] report that among Hungarian students, a significant reduction in physical activity was observed as a consequence of isolation, which in turn affected their mental health. Prime *et al.* [16] additionally posit that family well-being and resilience are pivotal in enabling students to cope with pandemic-induced stressors. In previous study, Goossens [17] examines the relationship between loneliness and emotional well-being during adolescence. Their findings indicate that isolation exacerbates feelings of loneliness and has a detrimental impact on mental health. Additionally, Rodríguez-Larrad *et al.* [18] examine how Spanish students experienced declines in physical activity and increased sedentary behavior, with notable gender-based differences in coping mechanisms.

This research study will analyze and identify the main factors that influence students' emotional state during the period of self-isolation caused by the COVID-19 pandemic, which includes examining the impact of social interactions such as contact with family, friends and teachers on students' emotional state. Thus, the objectives of the study encompass: i) analyzing the emotional state of students during a period of self-isolation; ii) identifying the factors that have the greatest impact on the emotional profile of students in self-isolation; and iii) an investigation into the strategies students use to manage their emotions during periods of self-isolation.

## 2. METHOD

Within the framework of this scientific research, conducted from 15-April-2024 to 25-April-2024 in Astana based on L.N. Gumilyov Eurasian National University, two surveys were used to collect empirical data. The total sample was 100 respondents aged 18 to 25 years, including both women (18 to 25 years) and men (18 to 24 years). The surveys aimed to identify factors influencing students' emotional state during self-isolation, such as levels of social support, emotion-regulation methods, and perceptions of psychological comfort. The reliability of the survey was confirmed through the use of Cronbach's alpha values, which exceeded 0.70, indicating a high level of internal consistency across items. The questionnaires employed in this study were adapted from established instruments utilized in psychological research, thereby ensuring their relevance and appropriateness for the target population. The validity of the surveys was established through expert reviews, which confirmed that the items effectively measured the constructs of interest.

The first survey focused on examining the impact of social support on students' emotional state. The first survey questions were closed-ended (survey participants had to choose a "Yes" or "No" answer for each question depending on their opinion). This included questions about the frequency and type of support they received from family, friends and teachers, as well as their perceptions of this support and its impact on their overall emotional well-being. The first survey included the following questions: i) Did family members provide you with emotional support during your self-isolation?; ii) Did you feel supported by your friends during the period of self-isolation?; iii) Did you feel that your teachers showed concern for your emotional state when you were self-isolated?; iv) Did having social support help you cope with feelings of loneliness during the period of self-isolation?; v) Do you feel that social support influenced your emotional well-being when you were self-isolated?; and vi) Did your emotional well-being improve as a result of interaction and support from relatives during periods of social isolation?

An additional survey of students was conducted. Students were presented with questions about the use of various methods of emotional self-regulation during self-isolation, such as meditation, breathing

exercises, sports and creative activities. The questions on this survey were also closed-ended: i) Have you engaged in meditation to self-regulate your emotions?; ii) Have you practiced breathing exercises to control your emotions?; iii) Have you made time for sports (exercise) to improve your emotional well-being?; iv) Have you engaged in creative activities (e.g., drawing, music, and writing) to regulate your emotions?; and v) Were the methods you used to self-regulate your emotions during the period of self-isolation effective?

Data from both surveys were analyzed to determine the popularity and effectiveness of various emotion self-regulation methods among students, along with the quality of social support during self-isolation. The results provided insights into the most common and effective self-regulation techniques. Additionally, they highlighted potential areas for enhancing emotional well-being during self-isolation.

### 3. RESULTS

#### 3.1. The role of psychological and social context in shaping learners' emotional reactions to self-isolation

The pandemic was a significant stressor for students, with concerns over health, academic performance, and uncertainty about the future driving stress levels [19], [20]. Online learning caused emotional distress by eliminating face-to-face interactions and disrupting daily routines. The provision of emotional support from family, friends, and teachers was identified as a key factor in maintaining students' emotional stability [21], [22]. Those who received emotional support exhibited lower stress levels, diminished feelings of loneliness, and an enhanced sense of well-being [23].

To manage stress, students employed a variety of techniques, including meditation, breathing exercises, physical activity, and creative pursuits. The most frequently method was breathing exercises, which were likely preferred due to their accessibility and immediate effect. While meditation and creative activities were employed less frequently, they nevertheless provided emotional relief to those who engaged in them [24], [25]. Online learning, although offering flexibility, resulted in screen fatigue, disrupted daily routines, and reduced physical activity, which had a detrimental impact on students' mental and physical health [26].

Notwithstanding the aforementioned challenges, a subset of students identified favorable elements within the context of self-isolation. These included the opportunity to spend increased time with family and the chance to pursue personal interests and engage in personal development activities. The period of self-isolation provided an opportunity for introspection and immersion in personal interests, which has been linked to certain psychological benefits. The utilization of contemporary communication technologies enabled students to remain engaged with their social networks, thereby mitigating feelings of loneliness. It is worth noting the importance of adaptation mechanisms to social isolation, which may include various strategies and behavioral adaptations that help individuals cope with the lack of social contact and maintain their psychological well-being, as in Figure 1.

Students can use modern communication technologies such as video calls, text messaging and social media platforms to keep in touch with their social network, including friends, family and colleagues. This helps to reduce feelings of loneliness and isolation, which is an important aspect of psychological well-being. Time that was previously occupied with social activities can be utilized to learn new skills, literary creations, exercise or creative activities.

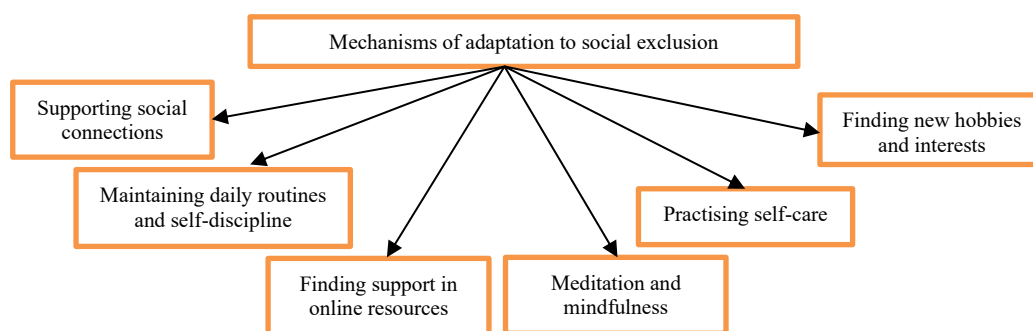


Figure 1. Mechanisms contributing to students' adaptation to social exclusion

Creating a structured schedule for each day of life, including specific time frames for work, leisure and social interactions, helps to increase a sense of control over one's life and reduce feelings of chaos and aimlessness [27]–[29]. Self-care, including proper nutrition, regular exercise, sleep adherence, and meditation, plays an important role in maintaining mental health in the face of social isolation. These practices help to reduce stress levels and improve mood. There are also a number of online resources

including support groups, forums and mental health apps where people can share their emotions and receive advice and support from others in similar situations. Meditation and mindfulness practices help to reduce stress levels, improve concentration and resilience to negative emotions. Regular practice of these techniques can contribute to better adaptation to social isolation.

### 3.2. Assessment of the emotional state of students during the period of self-isolation

The study of assessing the impact of social support on the emotional state in self-isolation presented a number of aspects in the context of psychological adaptation to changing circumstances. The results of the survey conducted among the students of L.N. Gumilyov Eurasian National University as in Table 1 allowed drawing several important conclusions about the influence of social support on the emotional state of students in the period of self-isolation. The majority of students (96%) indicated that social support was a significant factor in enhancing their emotional well-being during the period of isolation. The support provided by family members was identified as being of particular significance. With 85% of respondents, it is indicating that it had a beneficial effect on feelings of loneliness.

One of the key aspects confirmed by the survey data is the importance of family emotional support for learners in the period of self-isolation. In addition, the survey revealed the significant importance of support from friends for students in self-isolation. Such support promotes emotional well-being and a sense of belonging to a social group, which is important for maintaining psychological comfort under conditions of restrictions on communication. Also, the survey showed that the perception of care from teachers is significant for students in the period of self-isolation. The results show that a significant majority of students reported an improvement in their emotional state as a result of interaction and support from relatives during periods of social isolation, while only ten students reported no such improvement. This result suggests that support from relatives can create a sense of safety, comfort and reduce students' stress and anxiety levels. Knowing that there are people who care and are willing to help in times of difficulty can improve psychological well-being. Actively expressing care and support from relatives can improve students' self-esteem and increase their sense of self-worth. This, in turn, can contribute to a more positive attitude towards themselves and the world around them, which has a favorable effect on their overall emotional well-being.

This paper also surveyed students to investigate the effectiveness of emotion self-regulation techniques such as meditation, breathing practices, sports, and creative activities, as seen in Table 2. In summary, while a variety of techniques were employed to regulate emotional states, breathing exercises were the most prevalent and were perceived to be the most efficacious. Despite being employed less frequently, creative activities were found to provide a distinctive form of emotional relief for 25% of students. For all five questions, the majority of survey participants indicated that they used some self-regulation methods. However, the percentage of "Yes" responses varied depending on the specific method. Meditation as a method of emotion self-regulation was used by less than a third of the survey participants, while breathing exercises were more common and used by more than half of the respondents. This is due to the accessibility and ease of use of breathing practices compared to meditation, which requires a deeper understanding and practice.

Regarding physical activities such as sports or exercise, the results showed that about half of the survey participants included them in their regular practice to improve their emotional well-being. At the same time, creative activities such as drawing, music or writing were the least common among respondents due to individual preferences, availability of resources or time required for such activities. Overall, most participants felt that their chosen methods of emotion self-regulation were effective during the period of self-isolation.

Table 1. Results of the first survey of students of L.N. Gumilyov Eurasian National University

Questions	Yes (%)	No (%)
Did family members provide you with emotional support during your self-isolation?	48	52
Did you feel supported by your friends during the period of self-isolation?	63	37
Did you feel that your teachers showed concern for your emotional state when you were self-isolated?	50	50
Did having social support help you cope with feelings of loneliness during the period of self-isolation?	85	15
Do you feel that social support influenced your emotional well-being when you were self-isolated?	96	4
Did your emotional well-being improve as a result of interaction and support from relatives during periods of social isolation?	90	10

Table 2. Results of the survey regarding the effectiveness of methods of self-regulation of emotions

Questions	Yes (%)	No (%)
Have you engaged in meditation to self-regulate your emotions?	37	63
Have you practiced breathing exercises to control your emotions?	60	40
Have you made time for sports (exercise) to improve your emotional well-being?	45	55
Have you engaged in creative activities (e.g., drawing, music, writing) to regulate your emotions?	25	75
Were the methods you used to self-regulate your emotions during the period of self-isolation effective?	82	18

#### 4. DISCUSSION

The results of psychological aspects of self-isolation confirm that the feeling of loneliness has a negative impact on a person's mental health. It is often associated with increased levels of stress, anxiety and depression. Normal social interaction plays a key role in maintaining emotional well-being and its absence can lead to increased feelings of isolation [30], [31]. Ways of compensating for physical contact, such as video calls and social media communication, can be less fulfilling and emotionally less satisfying than real-world interactions, which can increase feelings of disconnection and isolation. Moeller and Seehuus [26] confirmed the important role of verbal social skills in students' experiences of loneliness, depression and anxiety. This indicates the need to improve social skills in college students to reduce the burden of mental discomfort. On the other hand, a study [32] found that high expectations may be associated with lower family functioning and loneliness, and low expressive suppression may lead to increased feelings of loneliness.

The results of this study show that despite the challenges and difficulties faced by learners during the period of self-isolation, some of them may find positive aspects in their new way of life. One such positive aspect relates to the opportunity to spend more time with family, which helps to strengthen relationships, enrich shared time and create new memories. The extra free time can also become favorable for pursuing hobbies, which brings pleasure and enjoyment. In addition, moving to an online learning format offers opportunities for self-development and in-depth study of areas of interest, which brings the satisfaction of achieving new knowledge and success [33], [34]. In turn, a study by Stephan *et al.* [35] indicates that the Internet and virtual environments can be effective tools to stimulate and enhance learning. Providing access to new and innovative educational resources at any time and from anywhere can facilitate active participation of learners in the educational process [36], [37].

The previous section shows that the majority of participants in the survey of L.N. Gumilyov Eurasian National University used various methods of self-regulation of emotional state during self-isolation. However, the level of use of different methods varied. The most common self-regulation methods were breathing exercises, which were used by more than half of the respondents. This may be due to their accessibility and ease of use. Whereas meditation was a less popular method, used by less than a third of the survey participants, probably due to the time and understanding it requires. Regarding physical activity, about half of the participants included it in their regular practice to improve their emotional well-being. However, creative activities such as drawing or music were the least common, perhaps due to individual preferences or limited access to resources. Despite the variety of techniques used, most participants found them effective during periods of self-isolation, emphasizing their importance in maintaining emotional wellbeing in the face of stress and isolation. Regarding other studies, Inzlicht *et al.* [38] emphasize the importance of self-regulation for successfully achieving personal goals, while Leyland *et al.* [39] argue that self-regulation contributes to long-term goals and well-being.

The findings illustrate the pivotal role of social support and self-regulation strategies in assisting students in navigating emotional difficulties during periods of social isolation. The role of family support was found to be significant, in alignment with the findings of Loderer *et al.* [40], who discovered that close social connections can help to alleviate feelings of loneliness. The high percentage (96%) of students who benefited from family and friends' support highlights the necessity of reinforcing social networks during crises. The efficacy of self-regulation methods, such as breathing exercises, was corroborated by 82% of students, mirroring the findings of Ibrahim *et al.* [41] on the effectiveness of self-regulation in emotional management. The utilization of diverse strategies, encompassing activities such as sports and creative outlets, highlights the advantage of a personalized approach to emotional well-being [42].

#### 5. CONCLUSION

The ongoing global pandemic has had a profound impact on numerous facets of public life, with students bearing a particularly heavy burden. The necessity for self-isolation and the transition to online learning have posed significant challenges for this demographic. These students experienced a range of psychological challenges, including feelings of uncertainty, fear, and loneliness. However, the situation also presented opportunities for them to strengthen their connections with family members and engage with personal interests in a more meaningful way.

The initial survey of Eurasian National University students indicated that social support from family, friends, and faculty was a crucial factor in maintaining emotional well-being during self-isolation. This support mitigated stress and loneliness, underscoring the significance of robust social networks in periods of crisis. Additionally, factors such as a balanced study load, diverse learning methods, and high self-efficacy were identified as crucial in promoting positive emotional health. The availability and quality of online resources had a mixed effect on students' well-being, indicating a need for the creation of supportive virtual learning environments.

To maintain psychological health during self-isolation, students employed a range of coping strategies, including the use of technology for social connection, structured routines, self-care practices, and mindfulness exercises. The second survey indicated that students had adopted a variety of self-regulation techniques, including meditation, sports, and creative activities, which they found effective in managing stress. A limitation of this study was the reliance on self-reported emotional states, which could be influenced by external factors. It is recommended that future research concentrate on the development and evaluation of support programs, such as online counseling, peer groups, and psychoeducation, with the aim of maintaining students' well-being during extended periods of isolation.

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## AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

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C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

## CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

## INFORMED CONSENT

We have obtained informed consent from all individuals included in this study.

## ETHICAL APPROVAL

The research related to human use has been complied with all the relevant national regulations and institutional policies in accordance with the tenets of the Helsinki Declaration and has been approved by the authors' institutional review board or equivalent committee.

## DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author [KN], upon reasonable request.

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