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Correlations of university students' feelings during the COVID-19 pandemic with academic adaptation and quality of life

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This study aimed to identify the feelings experienced by university students during the COVID-19 pandemic and its correlation with academic adaptation and quality of life (QoL). Through a **c**ross-sectional and correlational design, 90 university students completed a questionnaire about feelings, academic adaptation, and QoL during the pandemic. Spearman's correlation was used to identify the correlation between the feelings of academic adaptation and quality of life. Multiple linear regression models were used to identify the predictors of feelings of academic adaptation and the physical and mental components of the quality of life. Good academic adaptation and good QoL scores were identified in the sample. During the pandemic period, students experienced feelings of exhaustion, discouragement, irritation, exhaustion, insecurity, drowsiness, anxiety, worry, and tiredness with greater intensity. Positive feelings, such as energy and willingness, were reported as well. The feelings could predict variations in academic adaptation and physical and mental health. Additionally, a greater correlation of feelings was identified with the QoL domains related to the individual's perception of mental health. The results of this study highlight that, in the context of public health emergencies, investments are needed in institutional policies to support students, avoid difficulties in academic adaptation that impact dropout, and avoid the emergence or worsening of disorders such as anxiety and depression.

KEYWORDS

students, education, quality of life, academic adaptation, COVID-19

1 Introduction

The COVID-19 pandemic has impacted humanity in many ways, initially with overwhelming effects on health systems and later triggering a crisis in socioeconomic and cultural structures, especially in emerging countries, culminating in a syndemic (Bispo Júnior and Santos, 2021). From an individual perspective, isolation and the feeling of fear caused by the pandemic negatively impacted self-efficacy with an increase in self-perceived stress (Diotaiuti et al., 2023). In educational spaces, this health emergency resulted in a

need to adapt teaching and learning strategies and changed the dynamics of schools and universities worldwide.

In the context of higher education, difficulties in the transition to e-learning were related to the lack of infrastructure for online classes due to low investments in public universities. Difficulties in adapting to different technologies and the lack of internet access faced by students caused an increase in dropout rates (Peloso et al., 2020; Nunes, 2021; Turnbull et al., 2021). Factors such as social isolation, financial issues, internet connectivity, and, in general, the overall pandemic situation have created a conducive environment for students to experience anxiety symptoms (Ezra et al., 2021). Furthermore, the impact of the pandemic on the mental health and wellbeing of the population (Salari et al., 2020), especially young adults who are at greater risk of developing stress, anxiety, and depression (Varma et al., 2021), increased the risk of academic failure among students (Oliveira-Silva et al., 2021b) and, consequently, leading to dropouts in universities.

Scientific literature has reported dropout as a result of academic failure or low academic adaptation, which is usually related to a lack of motivation (Costa et al., 2018), anxiety/depression (Oliveira-Silva et al., 2021a), learning difficulties (Lima and Zago, 2018), burnout (Marôco et al., 2020), and, on a large scale, quality of life (QoL) (Baalmann, 2024). The cause-consequence relationship between these variables is still unclear, and the pandemic context requires a specific analysis of this relationship.

QoL is a broad concept related to the individual's subjective perception of wellbeing and position in life, which, in the health context, is related to the aspects that have an important influence on the individual's physical and mental wellbeing (WHOQOL Group, 1995). From the perspective of university students, QoL has an important correlation with physical activities, sleep quality, mental health, and factors that play an important role in the academic trajectory of students, influencing academic performance and retention in the university (Carpi et al., 2022; Baalmann, 2024).

Therefore, considering the impacts of the pandemic on university students' academic paths, this study was carried out to contribute to strengthening the knowledge of the impacts of COVID-19 on higher education students. Furthermore, the study was undertaken to understand the need to prepare educational environments to provide pedagogical support to students, in addition to creating strategies focused on mitigating the negative consequences brought about by the pandemic. Hence, this study aimed to identify the feelings experienced by university students during the COVID-19 pandemic and their correlation with academic adaptation and quality of life (QoL).

2 Materials and methods

2.1 Design

This is a cross-sectional, analytical, and correlational study conducted among higher education students from a northern Brazilian public university. This study was designed according to the recommendations of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement guidelines (von Elm et al., 2014).

2.2 Participants and data collection

The campus where the research was carried out has nine undergraduate courses (Nursing, Physical Education, Mathematics, Geography, Letters, Pedagogy, Philosophy, Natural Sciences/Chemistry, and Natural Sciences/Biology) offered between 3 and 5 years. It is a campus with students from various Brazilian states because of its strategic location, and it is considered an important institution for higher education.

Data collection was performed between September and October 2021 with undergraduate students from all courses who were available in person on the university campus. The sampling was non-probabilistic, intentional, and by accessibility depending on the student's acceptance to participate in the study, meeting the inclusion criteria of (1) being actively enrolled in the undergraduate course, (2) having in-person contact on campus at the time of data collection, and (3) being older than 18 years. Considering that the content of the questionnaire could present discomfort to the participant, it was decided to collect data in person to provide support if any perceived emotional distress was caused due to participation. The only exclusion criterion was students who did not complete the research forms.

During the data collection period, the campus had 507 students enrolled in the nine undergraduate courses, including those who were attending the subjects and those who were in the supervised curricular internship. However, given the adaptations made by the university for hybrid teaching through digital information and communication technologies during the COVID-19 pandemic period, face-to-face activities were reduced by up to 50%.

Therefore, with the reduced number of students on campus and the gradual resumption of face-to-face activities during the data collection period, it was estimated that a population of 100 students would be able to participate in the research, so all of them were invited to participate. Considering a confidence interval of 95%, statistical power of 80%, and 10% losses, a sample size of 88 students was estimated. After the face-to-face invitation, 90 students agreed to participate in the study, representing an acceptance rate of 90%.

2.3 Instruments

To assess the students' feelings, the researchers developed an instrument listing 24 words to describe some of the main feelings. The instrument was developed on a five-point Likert scale so that participants could indicate the frequency that best describes how they felt during the COVID-19 pandemic period in general. When the score for a specific feeling was >2.5, it was determined as a cutoff point to indicate that the student experienced a specific feeling. Therefore, the instrument had no diagnostic characteristics and only represented how intense the feeling was, as described by the person who reported it. The analysis of the instrument reliability using Cronbach's alpha test was 0.934.

To evaluate the academic adaptation, the *Academic Life-Experiences Questionnaire—reduced (ALEQ-r)*, an instrument developed in Portugal (Almeida et al., 1999) and validated in Brazil (Granado et al., 2005) with excellent reliability (Cronbach $\alpha = 0.908$), was used. The instrument consists of 55 five-point Likert

questions divided into five dimensions—personal, interpersonal, course/career, study, and institutional (Almeida et al., 1999).

To assess QoL, the *Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36)* was used. The SF-36 is a multidimensional instrument developed by Ware and Sherbourne (1992), and its second version was validated in Brazil by Laguardia et al. (2011), reaching good reliability in all domains (Cronbach $\alpha > 0.7$). Its 36 items include eight domains (functional capacity, physical aspects, pain, general health status, vitality, social aspects, emotional aspects, and mental health) divided into two summary measures: physical component summary (PCS) and mental component summary (MCS). PCS is formed by the domains of functional capacity, physical aspects, pain, and general health status, and MCS contains vitality, social and emotional aspects, and mental health (Taft et al., 2001).

2.4 Data analysis

Statistical analysis was performed in the statistical program R version 4.1.3. The variables were described in terms of absolute and relative frequencies, as well as means and standard deviations. The Shapiro-Wilk test was used to evaluate the normality of the quantitative variables. Regarding academic adaptation, values >3.0 were considered "good academic adaptation" (Almeida et al., 1999), while on QoL, the cutoff for "good QoL" was >50.0. The evaluation of the correlation between the feelings experienced by the students and the academic adaptation and QoL used Spearman's correlation coefficient (ρ). Multiple linear regressions were performed using the backward method to identify models for predicting the academic adaptation and physical and mental components of the SF-36 based on the feelings experienced by the students. Variables with $p < 0.05$ were considered statistically significant in all analyses.

2.5 Ethics aspects

The research project was approved by the research ethics committee of the Federal University of Tocantins (number 4,459,254), and all stages of the study were carried out according to the Declaration of Helsinki.

3 Results

3.1 Sociodemographic and academic characteristics

The study included 90 university students with a predominance of women students over the age of 20 years, those with brown skin color, those who were single, those who were exclusively studying at the time, those who had an income of up to one minimum wage per family, and those who were living with parents, spouses, or children. Regarding academic experience, most were nursing students who joined the university through wide competition and had no history of academic failure in the course (Table 1).

TABLE 1 Sociodemographic and academic characteristics of university students at a Brazilian public university.

Variable	*N*	%
Gender		
Woman	61	71.7
Man	24	28.3
Age		
≤20 years old	33	38.4
>20 years old	53	61.6
Color		
Brown	49	56.9
White	20	23.2
Black	11	12.8
Yellow	6	6.9
Marital status		
Single	78	90.7
Married/Stable Union	8	9.3
Work		
Yes	17	19.8
No	69	80.2
Income		
Up to 1 minimum wage	39	46.9
1–2 minimum wage	25	30.1
2–5 minimum wage	12	14.4
Above 5 minimum wage	3	3.6
No	4	4.8
Residence		
Parents/spouse/children	48	58.5
Alone/others	34	41.4
City of origin		
Same as the University	34	45.9
Another city	40	54.1
Course		
Biological sciences	4	4.6
Physical education	13	15.1
Nursing	38	44.1
Geography	4	4.6
Lyrics	1	1.1
Mathematics	6	6.9
Pedagogy	12	13.9
Chemistry	8	9.3
Entrance		
Wide competition	59	69.4
Affirmative action (Law No. 12,711/12)*	26	30.6

(Continued)

TABLE 1 (Continued)

Variable	N	%
Academic failure		
Yes	20	23.3
No	66	76.7

*Public policy regulated by Law 12.711/2012 aimed at allocating places for admission to higher education to students from minority groups, coming from public schools with a family income of <1.5 minimum wage, or self-declared black, brown, or indigenous students.

3.2 Feelings experienced by students during the COVID-19 pandemic

This study evaluated the students' perceptions of the 24 feelings they reported to have experienced during the pandemic. Supplementary Table 1 indicates the scores by means and standard deviations; the higher the score, the stronger the perception of that particular feeling during the COVID-19 pandemic period. The more intensely experienced feelings were those of being worn out, discouraged, irritated, exhausted, insecure, drowsy, anxious, worried, and tired (Figure 1).

3.3 Academic adaptation and quality of life

The ALEQ-r scores showed good academic adaptation (>3.0) among the participants in the following dimensions: personal, interpersonal, career/course, and institutional. However, in the study dimension, the scores were lower, suggesting that the students experienced difficulties in establishing study behaviors to their satisfaction. The SF-36 scores showed QoL scores of >50.0 in the domains of functional capacity, physical aspect, pain, general health status, and social aspect. However, the domains relating to vitality, emotional aspect, and mental health presented low scores. Additionally, PCS presented a score of >50.0, while MCS had a score of <50.0, suggesting low QoL in the sample for this component (Supplementary Table 2).

3.4 Correlation of feelings with academic adaptation and quality of life

The correlation analysis showed that most of the feelings experienced were related to the aspects of personal perception of academic adaptation, considering that this dimension assessed the physical and psychological wellbeing of the students in their academic experience. In particular, negative feelings had a negative correlation with the personal dimension of ALEQ-r, while positive feelings had positive correlations. Positive feelings, such as "willing" and "with energy", presented moderate and weak correlations with the study dimension. For QoL, the analysis showed a greater correlation of feelings with domains that were related to the individual's perception of mental health. Negative feelings showed moderate and strong correlations with the domain's vitality, social and emotional aspects, and mental health, while positive feelings showed positive correlations (Table 2).

3.5 Multiple linear regression

Three models were tested for multiple linear regression with academic adaptation, physical health, and mental health components of QoL as dependent variables. The three models were statistically significant and presented feelings capable of predicting variations in these outcomes, with the models explaining 36.8% of the variation in academic adaptation, 18.6% in physical health components, and 61.7% in mental health components (Table 3).

4 Discussion

The predominance of women students found in this study is similar to other Brazilian university contexts (Demenech et al., 2021). The relevant prevalence of negative feelings, such as exhaustion, discouragement, irritation, insecurity, drowsiness, anxiety, worry, and tiredness, may be closely related to the development of burnout syndrome and could indicate predisposing factors to the development of common mental disorders, such as depression or anxiety (Da Silva Oliveira et al., 2020).

It is acknowledged that prolonged social distancing during the pandemic, prior to vaccination, when the approach was to stop the spread of the virus, may have resulted in these emotions. This situation led to an increase in anxiety in many individuals who were restricted to in-person interactions with only a few family members and had to rely on digital means for socializing. Furthermore, it was observed that people experienced depressive feelings as a result of being separated from relatives and friends, being isolated and worried about infecting others, having fear of illness and death (themselves and others), and having diminished quality of sleep (Camacho-Zuñiga et al., 2021; Di Napoli et al., 2021).

The findings reveal that personal and mental health factors were significantly correlated with all emotions, highlighting the impact of the pandemic on individuals' inner lives and resulting mental health repercussions. Even prior to the pandemic, it was projected that mental health conditions would cost the global economy US$ 16 trillion by 2030 if left unaddressed. The experiences and research reported during the pandemic (Feter et al., 2021) indicate that more investments (Tausch et al., 2022), and the attention of healthcare professionals and universities are urgently needed for mental health. This attention is especially important for students who have to navigate part of their higher education under these conditions.

According to a recent study, a variety of individual and external factors affected the anxiety and stress levels among students. After a year of distance learning due to the pandemic, students expressed various concerns regarding the standard of education they would receive in person, whether they had been sufficiently prepared, and their ability to acquire various skills, such as building rapport with their instructors (Yaghi, 2022).

Although the ALEQ-r scores showed good academic adaptation (>3.0) among the participants in the personal, interpersonal, career/course, and institutional dimensions, the study dimension had lower scores, suggesting the student's difficulty in establishing study behaviors. These results are similar to those from other studies (Carleto et al., 2018; Oliveira-Silva et al., 2021a).

Carl Rogers, a leader in the theoretical approach to humanism, stated that education and psychology should consider the student

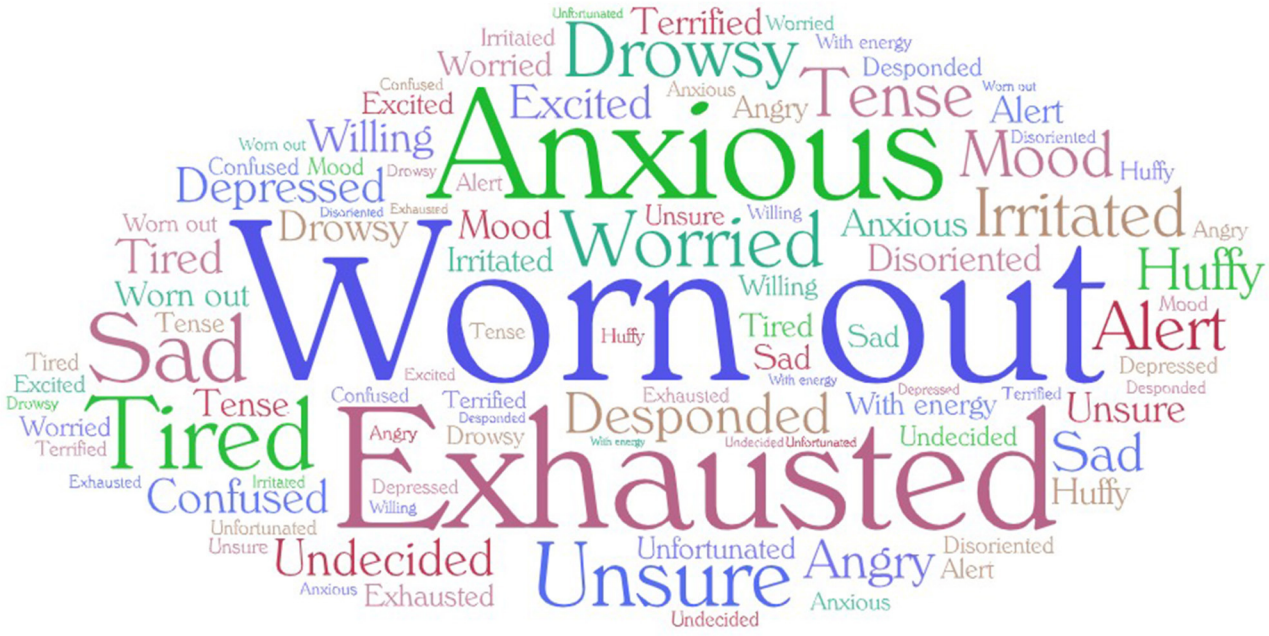

FIGURE 1
Feelings more intensely experienced by university students during the COVID-19 pandemic.

as the center of the process (Joseph, 2020). Furthermore, this highlights the role of the professor as a facilitator. To be a facilitator implies supporting students in their knowledge building, recognizing their previous experience and their feelings toward social facts to be discussed, being non-directive, exploring reflection and critical analysis, and encouraging discussion for learning (Bondioli, 2015).

We suggest that, in the pandemic context, considering the challenges reported by students with technology-mediated education, such as a lack of concentration, isolation and limited interaction with peers and faculty, interruptions in the learning process, and stress (Gaur et al., 2020), the need for facilitators and a humanistic approach became even more evident.

As the educational landscape continues to evolve following the pandemic, it is essential for educators to discuss the role of tutorship and mentorship in supporting their students, by providing guidance on defining their learning goals, and in understanding required competencies considering the course and role on society, to show them the different types of learning styles and strategies educators use to motivate learning among their students and demonstrate how they can use this knowledge for academic success. Tutorship has been recognized in the literature as a strategy to not only accelerate learning but also provide academic mentorship and build in-depth relationships with students (Kraft and Falken, 2021).

A positive and caring relationship supports students in their social-emotional development, and when paired with professional development, this results in the students successfully navigating the educational system (Bowman-Perrott et al., 2014; Balfanz and Byrnes, 2018). Tutorship and mentorship can potentially bring more clarity to students' pathways in education and could contribute to academic success despite the challenges.

It is important to highlight that our research data showed the copying skill of students regarding the positive correlation between course/career, study, and the institutional aspects of academic adaptation and positive feelings. Course/career correlated with disposition, study willingness, and energy, and institutional willingness and alertness.

All areas of human life are connected, making it impossible to divide course/career interests into emotional and social aspects. Carl Rogers' humanism theory for education, as a theoretical reference, emphasizes the fully functioning person, who combines the aspects of living the experiences with full presence, being open to sense the world around them, people, and themselves internally, and being able to trust their own feelings and reactions as guidance (Rogers, 1963).

The humanism theory for education has contributed to reflecting on a higher education approach. In Rogers' perspective, the fully functioning person must experience the educational process as part of their being and not being disconnected from their personal interests, feelings, and previous experiences in life (Rogers, 1963). The pandemic brought a variety of challenges, but not only that. It aroused feelings of fear and unsafe, yet, in parallel, people felt hope and used good feelings for coping, as we described in our research findings. All these aspects are part of the education process and should be of concern to educational institutions.

A greater occurrence of connections was detected in the personal dimension, which pertains to an individual's sense of their own wellbeing. Students are consistently incorporating new aspects into their sense of self, and personal experiences and interactions

TABLE 2 Spearman's correlation between the feelings experienced by students during the pandemic period and academic adaptation and quality of life.

Feeling	ALEQ-r						SF-36							
	Total	D1	D2	D3	D4	D5	FC	PA	Pain	GSH	VIT	SA	EA	MH
Terrified	−0.02	−0.26*	0.12	0.01	−0.04	−0.05	0.08	−0.08	0.05	−0.13	−0.19	−0.19	−0.26*	−0.26*
Excited	0.25	0.25*	0.16	0.13	0.16	0.09	0.13	0.27**	0.15	0.38**	0.37**	0.31**	0.11	0.42**
Confused	−0.13	−0.45**	0.20	−0.07	<0.10	0.04	−0.1	−0.23*	−0.02	−0.29**	−0.40**	−0.32**	−0.42**	−0.39**
Worn out	−0.24*	−0.60**	0.15	−0.08	−0.07	−0.06	−0.26*	−0.34**	−0.19	−0.38**	−0.62**	−0.48**	−0.54**	−0.54**
Depressed	−0.28**	−0.64**	0.10	−0.08	0.02	−0.07	−0.26*	−0.26*	−0.23*	−0.34**	−0.55**	−0.53**	−0.47**	−0.61**
Despondent	−0.30**	−0.65**	0.07	−0.09	−0.03	−0.07	−0.26*	−0.30**	−0.21*	−0.32**	−0.64**	−0.54**	−0.48**	−0.62**
Irritated	−0.11	−0.52**	0.10	0.04	0.01	0.15	−0.21*	−0.17	−0.17	−0.16	−0.40**	−0.35**	−0.32**	−0.40**
Exhausted	−0.16	−0.58**	0.13	<0.10	−0.01	0.03	−0.23*	−0.22*	−0.18	−0.33**	−0.58**	−0.51**	−0.46**	−0.54**
Unsure	−0.21*	−0.53**	0.13	−0.10	−0.02	−0.11	−0.24*	−0.24*	−0.15	−0.33**	−0.47**	−0.47**	−0.47**	−0.51**
Drowsy	−0.30**	−0.57**	0.15	−0.16	−0.15	−0.01	−0.22*	−0.09	−0.23*	−0.17	−0.48**	−0.54**	−0.41**	−0.43**
Huffy	−0.23*	−0.63**	0.05	−0.03	−0.02	0.01	−0.22*	−0.20*	−0.23*	−0.23*	−0.47**	−0.47**	−0.40**	−0.50**
Sad	−0.21*	−0.66**	0.20	0.02	−0.05	−0.05	−0.24*	−0.27**	−0.35**	−0.17	−0.56**	−0.57**	−0.48**	−0.60**
Anxious	−0.04	−0.57**	0.28**	0.13	0.07	0.05	−0.04	−0.11	−0.1	−0.16	−0.40**	−0.47**	−0.42**	−0.43**
Worried	−0.05	−0.53**	0.29**	<0.10	0.06	0.14	−0.14	−0.21*	−0.17	−0.13	−0.38**	−0.42**	−0.45**	−0.42**
Willing	0.42**	0.25*	0.19	0.29**	0.41**	0.22*	0.35**	0.31**	0.22*	0.54**	0.53**	0.46**	0.19	0.39**
Unfortunate	−0.29**	−0.52**	0.07	−0.07	−0.09	−0.17	−0.32**	−0.09	−0.09	−0.26*	−0.44**	−0.46**	−0.25*	−0.54**
Disoriented	−0.23*	−0.58**	0.14	−0.01	−0.12	−0.07	−0.14	−0.11	−0.16	−0.18	−0.47**	−0.45**	−0.41**	−0.53**
Tense	−0.25*	−0.65**	0.20*	−0.11	−0.05	−0.04	−0.15	−0.18	−0.2	−0.21*	−0.48**	−0.43**	−0.42**	−0.51**
Angry	−0.26*	−0.60**	0.05	<0.10	−0.09	−0.02	−0.27**	−0.17	−0.25*	−0.04	−0.41**	−0.37**	−0.43**	−0.53**
With energy	0.29**	0.34**	0.20	0.11	0.23*	0.13	0.24*	0.35**	0.16	0.55**	0.65**	0.43**	0.29**	0.51**
Tired	−0.17	−0.63**	0.20	−0.05	−0.08	0.07	−0.20*	−0.27**	−0.07	−0.27**	−0.61**	−0.50**	−0.40**	−0.48**
Mood	−0.2	−0.60**	0.16	−0.03	−0.07	0.05	−0.25*	−0.23*	−0.21*	−0.13	−0.43**	−0.43**	−0.26*	−0.50**
Alert	<0.10	−0.36**	0.09	0.02	0.08	0.22*	0.07	−0.09	<0.1	−0.06	−0.15	0.18	0.02	−0.19
Undecided	−0.11	−0.59**	0.22*	−0.02	0.01	0.16	−0.12	−0.07	−0.01	−0.29**	−0.38**	−0.29**	−0.23*	−0.36**

*$p < 0.05$; **$p < 0.01$.

D1, Personal; D2, Interpersonal; D3, Course/Career; D4, Study; D5, Institutional; FC, Functional capacity; PA, Physical aspects; GSH, General state of health; VIT, Vitality; SA, Social aspects; EA, Emotional aspects; MH, Mental health.

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TABLE 3 Multiple linear regression to predict academic adaptation (ALEQ-r) and physical (PCS) and mental (MCS) components of quality of life.

Model	β	R^2	Adjusted R^2	*p*-value
ALEQ-r[a]	2.432	0.446	0.368	<0.001
PCS[b]	39.492	0.222	0.186	<0.001
MCS[c]	39.565	0.643	0.617	<0.001

[a]Model adjusted for the variables excited, confused, worn out, depressed, irritated, exhausted, drowsy, worried, willing, tense and angry;
[b]Model adjusted for the variables terrified, sad, anxious, and willing;
[c]Model adjusted for the variables exhausted, irritated, drowsy, anxious, angry, and with energy.

in educational settings can influence the development of their self-image. These aspects can be either constructive or destructive self-regard, which can have an impact on their academic performance and social assimilation (Schwarz et al., 2021).

It is theorized that, during the pandemic, this process may have been impaired, impacting the described results in this research. The academic environment reflected not only the worldwide preoccupation with the pandemic and its consequences but also the internal dynamic of schools and universities.

In this perspective, elements of feeling confused, exhausted, depressed, irritated, sleepy, worried, tense, and angry appeared in the model as negative predictors of academic adaptation, in contrast with two feelings—excited and willing—as positive predictors. Other studies have also proposed that the COVID-19 pandemic resulted in conflicting feelings among students, characterizing their adaptation to the e-learning context in both negative and positive ways (Nunes, 2021; Turnbull et al., 2021).

Regarding the QoL of the students in the pandemic context, the domains of vitality, emotional aspect, and mental health had the lowest scores. These findings support previous research indicating that students struggle to balance their academic responsibilities with the demands of their personal lives, which can affect their personal relationships and self-image. Consequently, this impact can lead to the onset of anxiety and depression (Li et al., 2018; Viana and Sampaio, 2019; Kaparounaki et al., 2020).

Additionally, in the context of the COVID-19 pandemic, the literature has shown that lower QoL is associated with frustrations stemming from adapting to the online format from the face-to-face format, living in neighborhoods with a high prevalence of infection, and experiencing the presence of stress and depression symptoms (Abdullah et al., 2021).

In general, the correlations of feelings were stronger with QoL than with ALEQ-r domains. Other studies have reported that, during the pandemic period, students with lower QoL were usually those who were not performing physical activities and adapted less to e-learning (Abdullah et al., 2021; Azzi et al., 2022). This finding may be associated with an abrupt change to a new way of teaching and learning, which, together with social isolation, may have given rise to the emergence of negative feelings. This result corroborates our findings that QoL is connected with not only health aspects (physical and mental health) but also academic factors (Grande et al., 2021) and emotional regulation (Panayiotou et al., 2021), where the personal dimension plays a key role.

If it was already important for educators to establish trustful relationships with students to understand their goals, feelings, and perspectives, it has become even more relevant at present. Being attentive to mental health disorders among students and supporting and preparing them to be leaders in their communities are active roles that schools and universities must play in the humanistic perspective of education.

A recent study reported that psychosomatic disorders were more prevalent among students with lower QoL scores (Azzi et al., 2022), and they were more susceptible to bad feelings during the pandemic period. Additionally, in different research, it was found that students who had the highest emotional self-regulation were able to deal more satisfactorily with negative feelings and obtained higher QoL scores (Panayiotou et al., 2021). Universities aim to provide education to people and improve society through knowledge, leadership, and social transformation. It is only possible when universities are committed to a broader perspective of education and not limited to "doing and how to do it" but also on "being and who to be."

The limitations of the present study were associated with the small sample size obtained due to the in-person approach in a time of remote education; thus, it was not possible to aim for a homogeneous sample. Consequently, there was no comparison among students from different undergraduate courses, genders, or the presence of academic failures. Furthermore, the instrument developed for this study was not validated by experts, presenting only the reliability measure as a parameter. Moreover, the cross-sectional nature of the study did not allow for follow-up with students on their perceptions of their own feelings, quality of life, and academic success.

5 Conclusion

During the pandemic period, students intensely experienced feelings such as weariness, discouragement, irritation, exhaustion, insecurity, drowsiness, anxiety, worry, and tiredness. The results of the present study showed that students had good academic adaptation but faced difficulties in presenting assertive study behaviors and low QoL in the vitality, emotional, and mental health domains. The feelings reported by the students during the pandemic could predict variations in academic adaptation and physical and mental health. Additionally, QoL analysis revealed a greater correlation of feelings with the domains related to the individual's perception of mental health. These results show that, in the context of public health emergencies, investments are needed in institutional policies to support students, avoid difficulties in academic adaptation that impact dropout, and avoid the emergence/worsening of mental health conditions such as anxiety and depression.

Data availability statement

The original contributions presented in the study are included in the article/Supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were approved by Comitê de Ética em Pesquisa da Universidade Federal do Tocantins. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

PC: Conceptualization, Data curation, Investigation, Methodology, Project administration, Writing—original draft, Writing—review & editing. GO: Conceptualization, Data curation, Formal analysis, Methodology, Writing—original draft, Writing—review & editing. NA: Writing—original draft, Writing—review & editing. MB: Writing—original draft, Writing—review & editing. FQ: Writing—original draft, Writing—review & editing. LN: Conceptualization, Investigation, Writing—original draft, Writing—review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2024.1356251/full#supplementary-material

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