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## STRESS IN ETIM STUDENTS IN THE SETTING OF THE COVID-19 EPIDEMIC

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### ABSTRACT

The Covid-19 pandemic has been a significant stressor. Understanding and assessing the impacts that the pandemic brings to people is a way to help professionals design mental health care strategies. In this scenario, research carried out with students is highlighted to assess the pandemic's repercussions on education. However, most of these studies investigate undergraduate and graduate students. There is limited research exploring the reality of students in Integrated Technical Education to Middle School (Ensino Técnico Integrado ao Médio - Etim). Therefore, the present study sought to assess the stress among Etim students during the Covid-19 pandemic on a campus of the Federal Institute of Paraíba. Forty-six third-year students participated in this study. For data collection, an open questionnaire we used to identify the stressors perceived by Etim students and the Educational Stress Scale-Adolescents. For data analysis, the SPSS (Statistical Package for Social Sciences) program, Windows version 18, and the R Program version 3.5.2 were used for item selection and point calculations of the factors proposed by the scale, according to the Educational Stress Scale-Adolescents (ESA) methodology. The data analysis pointed out that the main stressors related to remote learning were difficulty managing the new routine, accumulating school activities, and missing face-to-face contact with colleagues, teachers, and the school community. The most prevalent symptoms of stress were those related to the Interpersonal and Cognitive factors, respectively. The predominant stress phase among students is related to the Resistance and Exhaustion factors. We conclude that interpersonal relationships are prominent for these students since their absence contributes to the increased stress that interferes with school difficulties. For this reason, it is necessary to take a critical look at remote teaching since this model presents barriers to learning.

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## INTRODUCTION

The high prevalence of problems related to mental health, such as stress, is associated, for some researchers, with the modern lifestyle that imposes an intense search for results and competitiveness models among people. As they are part of this society, adolescents are also affected by this lifestyle and hormonal changes and demands related to the moment of transition to adulthood (Costa, 2019). Depending on the context of the way adolescent experiences this period, such a life stage can be stressful. This situation requires adolescents to adopt strategies to cope with this situation. Concerning the school context, how the student will deal with developmental and contextual challenges can also affect problems related to mental health, directly influencing the student's academic performance (Schermann *et al.*, 2014). Stress is a complex and multifactorial phenomenon that has prompted studies in different areas from different perspectives.

It is characterized as the employment of cognitive and behavioral efforts that people use to manage, master, diminish or tolerate the internal and external demands that appear in a stressful situation (Folkman & Lazarus, 1980; Folkman, 2010). From the proposal of Hans Selye's General Adaptation Syndrome, Lipp proposed the Quadriphasic Model, comprising stress as "a reaction of the organism, with physical and or psychological components that occur when the person is confronted with a situation that, in a or on the other hand, it irritates, frightens, excites or confuses her, or even makes her immensely happy" (Lipp & Malagris, 2001, p.477). Such definition points out that not only events considered negative can cause stress, but also events considered good. According to the authors, stress results from the tensions that occur in people's daily lives, whose situation proves to be superior to the individual's capacity to face or master it. In this sense, stress interferes with people's quality of life, hindering motivation, which can cause a feeling of incompetence and reduced self-esteem. Aggregate to stress, there is the stressor,

characterized as any situation that interferes with the internal balance of the subject, requiring adaptation. In other words, one can say that the stressor is what causes stress (Lipp, 1996). It is essential to emphasize that the stressor varies from person to person since each subject has a life story and is inserted in a private social, cultural, and family context. In this sense, it is postulated that the stress response depends on the subject's history, individual characteristics, social support, and interpersonal relationships. In general terms, the context may act as a protection to the organism facing the events that mobilize stress or potentialize each subject's suffering (González, 2001). Tricoli and Lipp (2005) classify stress according to the reactions caused to the individual and can be grouped into psychological, cognitive, physiological, and interpersonal symptoms. Depending on the duration of the action of the stressor and the organic and/or psychological symptoms that are manifested by the subjects, stress can be classified into different phases: the alarm phase, resistance, quasi-exhaustion, and exhaustion (Tricoli & Lipp, 2005). The alarm phase is the initial response to the stressor; physiological reactions include increased blood pressure, muscle tension, increased attention, and racing thoughts. The second phase, resistance, is restricted by the maintenance of the stressor in which the subject presents a passive posture towards adaptation. The relative exhaustion phase represents a period of physical exhaustion that can worsen, leading to the next stage, which is considered worrying. The phase characterized as exhaustion occurs when the organism is weakened in the face of stress, facilitating the emergence of diseases. In this phase, there is a lack of resistance to the stressor and the appearance of serious diseases, which can lead to death (Lipp, 2003).

In adolescents, for example, factors such as social and cognitive issues and biological changes resulting from puberty can trigger stress. Generally, the studies dealing with stress in adolescence are mainly conducted with students. Such studies suggest that high levels of stress can trigger severe problems with the emergence of psychopathologies, primarily depression and even suicide attempts (Caires & Silva, 2011; Lundstedt & Gadin, 2012). It is noteworthy that the repercussions of stress among students directly impact this public's academic performance, professional trajectory, and human relationships (Tabaquim *et al.*, 2013). Researches that relate stress and academic experiences in high school point out that the excess of school activities, the professional choice, and the future are the most recurrent concerns that contribute to the emergence of stress among adolescent students (Machado, Veiga, & Alves, 2011; Camargo, Calais, & Sartori, 2015; Faria, Weber, & Ton, 2012; Peruzzo, Cattani, Guimarães, & Boechat, 2008; Santana, 2019). Regarding gender differences, Paggiaro and Calais (2009) found that more than half of the students in a pre-vestibular course showed manifestations of stress, mostly female students. Concerning the stress phase that these students were in, most were in the resistance phase. Regarding symptomatology, psychological symptoms were the predominant ones in the sample studied, in which more than 85% presented such symptoms. In the context of Integrated Technical Education to Middle School (Ensino Técnico Integrado ao Médio - Etim), Gusmão (2016) points out that it is necessary to observe the entry of students critically since the entry of these students has been directed by the objective of obtaining a better quality secondary education, from the than the desire to undertake a technical course.

This situation causes institutional problems and also problems for the students themselves, who are faced with the challenge of performing their high school activities (high school curriculum and studies for entrance exam/National High School Exam - ENEM) and, at the same time, meeting the demands arising from technical courses: specific subjects, extension, research, internship and elaboration of the course conclusion work. According to researchers in the area, this set of factors increases these students' feeling of overload and, consequently, stress (Gusmão, 2016; Tabaquim *et al.*, 2013). In addition to the issues already being studied about stress related to the academic environment in high school, the pandemic caused by Covid-19 has significantly changed students' routines and schools. The social distancing measures guided by the World Health Organization (WHO) and followed by most countries, including Brazil, resulted in

schools closing and suspension of face-to-face classes (Almeida & Alves, 2020). In the Brazilian context, the Ministry of Education decreed on March 17, 2020, through Ordinance No. 343, the suspension of face-to-face classes and the consequent replacement by activities anchored in digital media offered by remote learning while the pandemic lasts. Against this backdrop, many studies have been carried out to understand the pandemic context's repercussions on education. The research on Youth and the coronavirus pandemic (Conjuve, 2020) presented the impacts caused by covid-19 among young people in Brazil. This study was carried out with a total of 33,688 young people in June 2020 and aimed to investigate the effects of the coronavirus pandemic among young people. Concerning habits, the relationship with education and work, economic situation, and health condition, it was found that the pandemic has affected physical conditioning, sleep quality, availability of financial resources, relationships at home, and especially emotional health. The stress caused by the pandemic brought barriers, including remote learning, such as difficulties in dealing with emotions and in organizing studies (Conjuve, 2020). The practical difficulties arising from remote learning, such as the difficulty or absence of internet access, quality of connection, and adequate study environment, as well as socio-emotional difficulties, are obstacles that bring harm to this current teaching modality, negatively affecting school performance and mental health of students (Vieira & Silva, 2020). In view of the challenges related to completing high school and the context of the pandemic, it is important to understand how the reality of remote learning has impacted the mental health of ETIM students. The scarcity of research on stress aimed at this public is highlighted. In this sense, we sought to identify the main stressors and stress levels experienced by students of technical courses at federal institutes of a campus interior of the State of Paraíba, Brazil. It is hoped that this study may foster actions that contribute to reducing stress and increasing the quality of life of these students.

## MATERIALS AND METHODS

**Study design and data sources:** This is an exploratory and descriptive study with a quanti-quali approach. Such an approach makes it possible to assess the appearance of the phenomenon being evaluated, as well as to deepen its understanding. With this type of methodological approach, it was sought to enjoy these two types of approaches, extracting from each of them the best of each aspect (Minayo & Sanches, 1993). Forty-six students aged between 15 and 18 years old enrolled in 2021 in the third year of Integrated Technical Education to Middle School (Etim) from one of the campuses of the Instituto Federal da Paraíba (IFPB) collaborated with the research. Of these, 28 are female, and 18 are male. These students are linked to the three technical courses offered by the campus: Musical instrument, Building technician, and Technician maintenance and support in computers.

The sample's composition occurred in a non-probabilistic way, by convenience, being excluded those students who were not active in the remote classes and who had ages below 14 and above 18, considering the age range recommended by the Educational Stress Scale-Adolescents (ESA) instruments. In order to reach the objectives of the research, the following instruments were used: 1 - Open Questionnaire: The open questionnaire aimed to identify the stressors perceived by the adolescents. In this way, we used four open questions about the current teaching process and the school context during the pandemic, namely: In your opinion, what difficulties do you face in your school routine? What good things does the school context have? During the covid-19 pandemic, remote learning and social distance became a reality. In your opinion, what has the pandemic changed in your school life? What difficulties did the pandemic bring to your daily school life? In a pandemic context, this instrument allowed us to apprehend the opinions, feelings, expectations, and situations experienced by the adolescents studied. 2 - Educational Stress Scale-Adolescents (ESA): was created and validated by Tricoli and Lipp (2005) and aimed to verify the presence of stress in adolescents aged between 14 and 18 years and allows

identifying the stress phase where the subject is. The scale consists of 44 items evaluated in two columns, the period of symptom incidence and symptom perception, and the answers are obtained through a five-point Likert scale (1 to 5). The items in this instrument relate to four factors corresponding to stress reactions, according to the following factors: psychological symptoms (24 items), cognitive (6 items), physiological (9 items), and interpersonal (5 items). Each item of the scale also corresponds to one of the four stages of stress, namely: alert (19 items), resistance (9 items), quasi-exhaustion (11 items), and exhaustion (5 items). The analysis of this instrument allows for categorizing the adolescent in "no stress" or "with stress" and classifying the symptom and the predominant phase of stress (Tricoli, 2005). ESA was adapted to digital format, through Word, due to the need that the context of social distance caused by the Covid-19 pandemic in 2020 and 2021 demanded. The data formed a database from which corrections followed according to the criteria established in the manual (Tricoli, 2005).

**Data extraction and analysis:** The research began after the authorization of the campus directors and the approval of the ethics committee of the Universidade Estadual da Paraíba. It is worth mentioning that data collection was performed virtually, given the context of social isolation due to the Covid-19 pandemic. Disclosures about the research were carried out in the WhatsApp groups of the third-year classes of one of the IFPB campuses, informing the student body about the voluntary nature of the study. Subsequently, the researcher was present in the virtual classroom with the students who showed voluntary interest in participating in the research. On this occasion, instructions were given to students on how to answer the instruments, informing them of the need to fill out the Informed Consent Form (TCLE) and the Form (forwarded to the parents of students under 18 years of age) answer the instruments then. The Stress Scale for Adolescents (Escala de Estresse para Adolescentes - ESA) and the questionnaire were adapted to Word and sent to students by email or WhatsApp, who also returned completed instruments by the referred virtual means. It is worth mentioning that the research followed the ethics committee's recommendations of UEPB (No. CAAE 42764721.30000.5187). For analysis, we used thematic content analysis, as proposed by Bardin (2016), following the steps of pre-analysis, coding, treatment of results, and interpretation offered by the author mentioned above. Then, we carried out a floating reading of the material, construction of the registration units by the themes addressed, coding of the teams, construction of the thematic categories, and interpretation of data. For the analysis of the ESA data, we followed the guidelines for correction presented in the manual of the instrument (commercialized). We used the SPSS (Statistical Package for Social Sciences) program version 18 and the R 3.5.1 program to assist in the cut-off point of the factors and calculate the descriptive statistics (mean, frequency distribution variance, and standard deviation).

## RESULTS AND DISCUSSION

The qualitative analysis allowed the construction of three categories related to the teaching process, the school context, and the students' daily stressors, considering the remote education, namely: perception about the school, difficulties in everyday school life, and repercussion of the pandemic. The students received identification through letters representing the alphabet sequence and age to maintain confidentiality.

**Perception about school:** The category "perception about school" sought to describe the view that students have about the school environment. According to the participants, the school was represented, above all, as an "expectation of a better future" and a "space for relationships": "It represents a good place for my development to be able to perceive that education is of quality, and to meet people who have the same interest as mine" (A., 17 years old); "Opportunities, knowledge, people (from the cleaning aunts to the teachers/director)... represents evolution, learning the school offers you what you need, which is knowledge. The school represents many

things for me because it is from it that I can get where I want". (B. 17 years old); "Being able to leave home, meet people, friends, and have a good education." (C. 17 years old). The students' reports demonstrate that the school is perceived beyond being a place "only to learn," it is a space for mobility, interaction, and relationship building. Space allows adolescents to socialize, create affective memories, and prepare for the future, demonstrating that "being present" at school helps students print good expectations about the future through education and create essential bonds. The school is a formative space where culture and knowledge accumulated by humanity are transmitted; where the transmission of cultural values of a given society occurs, transferred through socialization and sharing of experiences arising from the school context (Amaral, 2007; Santos, 2019; Giugliani *et al.*, 2020). In this way, a school is a primordial place of socialization for teenagers, and being in groups and making friends denotes a healthy trait of this stage of development (Giugliani *et al.*, 2020). Furthermore, according to Carvalho *et al.* (2019), having a good support network is an excellent predictive sign of mental health and decreased vulnerabilities to physical and mental illnesses for students graduating from high school. The school, therefore, is an excellent place to meet people, demonstrating that the school context can also produce health, as healthy bonds favor good psychological and social repertoires such as empathy, a support network, and ways of dealing with stressful events. The absence of school spaces, due to the pandemic context, can contribute to the emergence of suffering and difficulties related to facing remote learning.

**Difficulties of daily school life:** The category "Difficulties of daily school life" concentrates on the main difficulties encountered by students in their school context. Such difficulties refer to the "organization of studies and social life" and the "lack of concentration and learning": "Sometimes I don't have time to read because of my studies. This does cause a little stress, so, in person, the time to dedicate to myself as a person would be the main problem" (D, 17 years old); "Lack of attention and 28 concentration." (E., 17 years old); "The lack of attention, I can't concentrate." (F., 17 years old); "Schedule, lots of schoolwork and little time to do everything." (G, 17 years old). According to the data obtained in this research, there is a difficulty in reconciling studies and social life, which is a problem for these young people. Therefore, we perceive that the overload and limitation of time for leisure is a factor that raises the level of stress among the sample studied, making it even more challenging to organize time. This inference is related to the extensive margin of time that these students dedicate to their studies, leaving little time for rest and leisure. The excessive amount of subjects that ETIM students have, added to the obligation to perform tests and deliver papers in the same week. In addition, participating in research and extension projects, and preparing for a final course assignment and internship work, is an extensive journey that has led to intense suffering among students (Brito, 2011; Faria, 2017). Thus, it is necessary to emphasize that besides being candidates for entrance exams, ETIM students also need to dedicate themselves to the subjects and activities of the technical courses. Sodré (2017) argues that ETIM students' curricular activities, especially third-year students, compare with the journey of undergraduate courses. In this way, it is essential to highlight the need to listen to what the students bring as problems of teaching, face-to-face and remote since they are the ones who experience this reality. It is important to emphasize that the absence of leisure time among adolescent students increases stress levels, affecting school performance and compromising students' physical and emotional health (Tabaquim *et al.*, 2013). Therefore, school managers and technicians must think of ways to help students who have difficulty organizing their study routine by offering support through actions that help students face this obstacle.

**The repercussion of the pandemic:** The category "the repercussion of the pandemic" presents the main problems perceived by students in the context of the remote classes, "overload and difficulty in learning" and "absence or difficulty in contacting teachers and friends." The students' speeches exemplify this problem: "Doing much stuff on the internet.

**Table 1. Factors related to stress symptoms**

	Psychological	Cognitive	Physiological	Interpersonal	Total
Female	18.84%	18.84%	11.59%	17.39%	66.66%
Male	7.25%	8.70%	5.80%	11.60%	33.35%
Total	26.09%	27.54%	17.39%	28.99%	100%

**Table 2. Factors related to stress periods**

	Alert	Resistance	Quasi-exhaustion	Exhaustion	Total
Female	14,81	20,37%	14,81%	18,52%	68,51%
Male	9,26%	9,26%	5,56%	7,41%	31,48%
Total	24,07	29,63%	20,37%	25,93%	100%

Tiredness increased, and I could not learn the same way; I spent too much time at home. I feel tired of doing everything inside the house, outside that I feel I am not learning if the way I am doing it is right" (H, 17 years old); "One of the difficulties was the loss of concentration in the classes, thus having to make an effort to acquire the content." (I, 18 years old); "Too many activities with too little time frame, not taking questions in a more accessible way. Lack of direct communication with teachers at activity times." (J, 17 years old); "Being able to keep up with synchronous classes and do activities on time. Managing time." (L, 17 years old). The data shows the students' difficulty in dealing with the number of activities in a virtual scenario that makes social interaction so valued by students, including teachers, impossible. Therefore, the results are in line with research conducted by the Brazilian Association of Distance Education (ABED, 2020) and Conjuve (2020), which also found students' difficulties in establishing and organizing a daily study routine during remote learning. Furthermore, this study found that the absence of proximity to teachers has been causing suffering among students and contributing to learning difficulties. The students see themselves facing a redoubled effort to understand a specific subject since the behavior of asking questions with teachers has become affected in the face of social distancing. Thus, the absence of personal contact with teachers and peers requires students to devote more effort to understanding subjects, which can increase the feeling of overload on the part of students.

We noticed that the execution of online classes could compromise the quality of education, leading to the need for the student to understand the subject independently or without adequate monitoring. Having difficulty obtaining support and the opportunity to ask questions with teachers is considered one of the main barriers that appear during remote learning since, without adequate contact, it is up to students to look for ways to resolve doubts and learn the subject, as also pointed out by the ABED study (2020). The prolonged effects of quarantine, such as the absence of contact with classmates, concerns about the possibility of being infected by the virus, and absence of adequate space at home (which contributes to decreased physical activities). These are the main factors that probably contribute to the onset of stress among students, especially primary school students (Dias & Pinto, 2020). The importance of being in contact with friends and social groups is fundamental for the healthy development of adolescents. Amaral (2007) argues that, when inserted and accepted in groups, adolescents start to experience feelings of belonging and inclusion, i.e., pleasurable feelings that can help students develop social and cognitive skills for their present and future moment. In this sense, being in a group is related to the social support network that this adolescent needs to share moments and help face difficult phases, such as stress. For this reason, remote learning, arising from the need for social distancing, seems to compromise students' quality of life, causing stress and, consequently, hindering the learning of Etim students.

**Analysis of stress:** The data from the ESA allowed us to identify the main symptoms and periods of stress found among the students in the sample. Thus, concerning symptoms of stress, it was found that 44.82% of the sample had symptoms of stress.

Of these, most had symptoms in the Interpersonal factor (17.39% female and 11.60% male); 27.54% in the Cognitive factor (18.84% female and 8.70% male); 26.09% in the Psychological factor (18.84% female and 7.25% male) and Physiological factor (17.39% female and 11.60% male) as shown in Table 1. We sought to identify the main symptoms of stress for each factor to relate them to the qualitative data. Thus, in the Interpersonal factor, we highlight item 19, "I am isolated most of the time" (score 142); item 30, "I am shy" (score 143); item 9, "I have relationship difficulties" (score 120). In this aspect, it is noteworthy that the dimension of the interpersonal factor is related to the interaction with friends, family, and affective relationships. With a similar sample, the literature indicates that male students generally have greater difficulty in interpersonal relationships than female students (Calais, Andrade & Lipp, 2003). Parts of these authors explain that boys show greater shyness and difficulty initiating conversations and friendships than girls. This situation has as its main argument the fact that girls are more encouraged to engage in pro-social activities than boys. These data indicate that some Etim students have difficulty managing and/or dealing with social relationships in the context. The pandemic scenario probably interferes in the interpersonal sphere through the absence or tension of relationships experienced by these students. Current studies dealing with the repercussions of the pandemic on education point out that the main complaint of students in remote learning is the longing for classmates and difficulty in communicating with teachers (ABED, 2020; Conjuve, 2020). This same reality was found among the present research students, which leads to the inference that the context of the pandemic may be related to the almost 29% of interpersonal stress found in the sample. In the cognitive factor, items 17, "I cannot concentrate" (score 170), stand out; 29, "I have had difficulties with studying" (score 154) and 24, "I have difficulty learning" (score 137).

The data from the ESA are in line with the reports from the questionnaire since the students present the same difficulties reported in the open questionnaire: the difficulty of concentration and the problems related to learning. The cognitive factor is one of the essential repertoires for students since this dimension is related to concentration, memory, and creativity activities (Tomasello, 1997). Therefore, the data from this research indicate that this is one of the factors that suffered the greatest impact due to the context of remote classes caused by the pandemic. This situation reveals the increase of stress among students in the sample and points to the damage to the students' health, fitting a reflection on the remote learning model for the teaching-learning process. Thus, it is noteworthy that the high number of students with cognitive symptoms of stress during the pandemic can be seen as a phenomenon of collective and social nature and not just a matter of individual problem, as alerted by Vieira and Silva (2020). Regarding the psychological factor, it was found that anxiety (item 13; score 173) and insecurity (item 9; score 171) were the most frequent symptoms. So, given that the symptoms of the psychological factor are mainly caused by emotional stimuli, loss of affection, security, or situations that appear as a physical or moral threat, it can be assumed that anxiety and insecurity are related to a lack of support colleagues and other social contacts (Machado *et al.*, 2011). Students frequently reported the absence of these contacts through the questionnaire, which suggests the level of importance that

these relationships have for students. Moreover, the feeling of insecurity may be related to learning since, without adequate support in the presence of important figures, students may feel more insecure about studying remotely. It is also essential to consider that these students may be afraid of their family contracting the Covid-19 virus, which can become a physical threat, one of the causes described by psychological stress (Machado *et al.*, 2011). In terms of the physiological dimension, item 1, "I have headaches" (score 124), and item 37 (score 142), "I have back pains," stand out. The long permanence at home is associated with the structural difficulties of the home, such as the lack of an adequate environment for studies with silent spaces; objects that ensure ergonomics and comfort (table, chair); the long exposure to light of electronic devices (mobile phone and computer) and the increase of sedentary lifestyles, maybe collaborating to the appearance of these symptoms of stress among the students. It is also possible to think about the increase in sedentary lifestyles among students since health policies related to Covid-19 imposed the need for social distance, which prevents or hinders people's mobility. Even in this reality, the school needs to think about educational practices, such as better technologies and information on ergonomics, in addition to promoting activities that encourage physical and relaxation exercises, which can be performed at home, to reduce the damage resulting from sedentary lifestyles and assist in the quality of life of students. The data on the stress phase shows that most of the sample with stress symptoms is in the resistance phase (29.63%) and exhaustion phase (25.93%), as presented in Table 2. It is essential to pay attention to the period when data collection started to analyze these results more precisely. In the institution where this research was conducted, the school year began in February 2020; however, in March of the same year, classes were suspended and only resumed in August 2020<sup>1</sup>.

Despite, between the months of March (suspension of face-to-face classes) and August (beginning of remote classes), the public health procedures adopted by Brazil were already being experienced by students, who lived the expectation of whether or not to return to classes. Thus, it is important to note that this study started in December 2020, four months after the beginning of the remote classes. This points to the fact that, had this study been conducted at the beginning of the remote classes, the results could have referred to the alert phase since, according to the literature, the resistance phase is the initial period in front of the stressful event. This phase helps the subject deal with problems, encouraging people to search for solutions. Thus, it can be thought that, between the period from August (beginning of the remote classes) and December (beginning of data collection), most students in the sample did not find strategies to deal with the stressful event, thus occurring the persistence of the stressor causing deepening of stress that led them to the resistance phase. This explanation is in line with the definition given by the authors (Lipp, 2003), who explain that the resistance phase arises when the previous period, the alert period, lasts for a long time and other stressors accumulate.

The exhaustion phase is considered the most worrying since it is the most acute period of stress, and in it, there is no resistance to the stressor. In this phase, diseases such as ulcers, high blood pressure, and psoriasis may arise, in addition to the appearance of deepening problems related to mental health, such as anxiety and depression, according to Lipp (2003). It is believed that the 25.93% incidence of exhaustion found in the sample is related to the context of the pandemic since the rapid need to adapt to remote learning, added to the well-known stressors of the school period, required greater use of effort, in the part of the students, in order to master the new format and thus learn. Therefore, we emphasize the need for studies that allow comparing the phases of stress encountered during the pandemic period and the context of face-to-face teaching among the Etim public. It is alerted to the impact on mental health that the stress

in the exhaustion phase generates to the students, which can favor or deepen diseases and psychopathologies and increase school dropout.

## FINAL CONSIDERATION

This study aimed to investigate the levels of stress and the stressors of the school context perceived by students of Etim from one of the campuses of IFPB. The set of results presented has the purpose of collaborating with the understanding of the relationship between stress and the school context of Etim, including the scenario of remote classes, of helping in the elaboration of institutional proposals directed to mental health, psychological well-being, and even improvement of school performance of students of technical courses. In general, the present study revealed that the increase in school activities and the difficulty in managing time for studying and leisure; the absence in the person of classmates and professors; the lack of concentration in front of online classes, and dealing with the entrance exams year period during the remote learning, brought aggravation to the mental health of the students, through the appearance of stress in the phase of resistance and exhaustion and through the reports that the students brought about the difficulty of learning during the remote learning. In order to do so, it was evidenced, both through qualitative and quantitative data, the importance of face-to-face relationships for adolescent students. It was noticed that face-to-face contact with colleagues and people from the school community brings academic and social benefits and promotes health since the school space favors pro-social interactions. Relationship difficulties were one of the main difficulties found in the data of this research, resulting from the high number of students with interpersonal stress.

In this way, it is alert to the need for the school community to consider the number of academic tasks directed to students during the period of remote classes since students are employing much cognitive effort to learn in this new context. The importance of enabling spaces that promote social interactions between classmates and the school-students community is also highlighted, as well as the encouragement of physical and relaxation activities that can be useful to reduce the impact of physiological stress. We advocate the idea that stress is a phenomenon that presents multiple explanations, and understanding its contours becomes necessary since research points out that stress can hinder or disrupt learning and the set of academic skills needed by students. As the limitation of this study, we point to the fact that the present research was carried out on only one of the IFPB campuses. Thus, the lack of similar research with the public of the Etim makes it difficult to elaborate on more in-depth discussions because it does not allow comparing the sample data with those found in studies with the public of other Etim institutions. Another limiting factor was that the sample was obtained by convenience, which does not allow us to generalize. Finally, it is important to highlight that family contexts (income, parents' education, family configuration), cultural (religion, participation in collectives), and social and gender differences are important variables in studies that relate stress, adolescence, and the epidemic context, which deserve attention in further investigations since psychosocial issues need to be taken into consideration when proposing to discuss such matters.

## REFERENCES

- Almeida, B. O. & Alves, L. R. G. 2020. Letramento digital em tempos de COVID19: uma análise da educação no contexto atual. *Debates em Educação*, 12(28), 1-18.
- Amaral, V. L. 2007. *Psicologia da educação*. Recuperado de [http://www.ead.uepb.edu.br/arquivos/cursos/Geografia\\_PAR\\_UA\\_B/Fasciculos%20-%20Material/Psicologia\\_a\\_Educacao/Psi\\_Ed\\_A12\\_J\\_GR\\_20112007.pdf](http://www.ead.uepb.edu.br/arquivos/cursos/Geografia_PAR_UA_B/Fasciculos%20-%20Material/Psicologia_a_Educacao/Psi_Ed_A12_J_GR_20112007.pdf)
- Associação Brasileira de Educação a Distância (ABED). 2021. Censo EAD.BR 2019-2020. Relatório analítico da aprendizagem a distância no Brasil. Recuperado de [http://abed.org.br/arquivos/CENSO\\_EAD\\_2019\\_PORTUGUES.pdf](http://abed.org.br/arquivos/CENSO_EAD_2019_PORTUGUES.pdf)

<sup>1</sup>The institution's official website released the story informing about the start of the non-presence classes:  
<https://www.ifpb.edu.br/joaopessoa/noticias/2020/08/atividades-de-ensino-nao-presenciais-comecam-dia-08-de-setembro>.

- Bardin, L. 2016. Análise de conteúdo. São Paulo: Editora 70. Recuperado de <https://madmunifacs.files.wordpress.com/2016/08/anc3a1lise-de-contec3badolaurence-bardin.pdf>
- Brito, I. 2011. Ansiedade e depressão na adolescência. *Revista Portuguesa de Clínica Geral*, 27, 208-214. Recuperado de [http://www.scielo.mec.pt/scielo.php?script=sci\\_arttext&pid=S0870-71032011000200010&lng=pt&tlng=pt](http://www.scielo.mec.pt/scielo.php?script=sci_arttext&pid=S0870-71032011000200010&lng=pt&tlng=pt)
- Caires, S. & Silva, C. 2011. Fatores de stress e estratégias de coping entre adolescentes no 12º ano de escolaridade. *Estudos de Psicologia*, 28(3), 295-306.
- Calais, S. L., Andrade, L. M. B. & Lipp, M. E. N. 2003. Gender and schooling differences in stress symptoms in young adults. *Psicologia: Reflexão e Crítica* 16(2), 257-263. doi: 10.1590/S0102-79722003000200005 39
- Camargo, V. C. V., Calais, S. L. & Sartori, M. M. P. 2015. Estresse, depressão e percepção de suporte familiar em estudantes de educação profissionalizante. *Estudos de Psicologia*, 32(4), 595-604. Recuperado de <https://doi.org/10.1590/0103-166X2015000400003>
- Carvalho, I. F., Almeida-Santos, M. A. & Vargas, M. M. 2019. Preditores de stress em concluintes do ensino médio. *Arquivos Brasileiros de Psicologia*, 71(2): 114-129. Recuperado de <https://dx.doi.org/10.36482/1809-5267.ARBP2019v71i2p.114-129>
- Conselho Nacional de Juventude (CONJUVE). 2020. Pesquisa Juventudes e pandemia do coronavírus. Relatório de resultados. Recuperado de <https://www.juventudeseapandemia.com/>
- Costa, M. C. N. 2019. Estágio supervisionado de formação de professores III: trabalhando a saúde mental na educação de jovens e adultos. Relatório de Práticas Educativas. Universidade Federal do Rio Grande do Norte, Natal, RN, Brasil.
- Dias, É. & Pinto, F. C. F. 2020. A educação e a Covid-19. Ensaio: Avaliação e políticas Públicas em Educação, 28(108), 545-554. Recuperado de [https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0104-40362020000300545](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-40362020000300545)
- Faria, A. A. G. T. 2017. Experiências e sentidos da escola na perspectiva dos jovens no Instituto Federal de Alagoas – IFAL. In F. Negreiros & M. P. R. Souza (Orgs.). Práticas em psicologia escolar: do ensino técnico ao superior (pp. 78-94). Teresina: EDUFPI.
- Felício, A. S. 2019. Ansiedade, estresse e estratégias de enfrentamento em adolescentes de instituições particulares que irão prestar vestibular. Dissertação Mestrado em Psicologia. Universidade Federal de Sergipe, São Cristóvão, SE, Brasil. Recuperado de [https://ri.ufs.br/bitstream/riuf\\_s/12451/2/ANDREIA\\_SANTANA\\_FELICIO.pdf](https://ri.ufs.br/bitstream/riuf_s/12451/2/ANDREIA_SANTANA_FELICIO.pdf)
- Folkman, S. & Lazarus, R. S. 1980. An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21(3), 219-239. Recuperado de <https://www.jstor.org/stable/2136617>
- Folkman, S. 2010. Stress, coping, and hope. *Psycho-Oncology*, 19, 901-908. doi: 10.1002/pon.1836
- Giugliani, C., Cesa, K. T., Flores, E. M. T. L., Mello, V. R. & Robinson, P. G. 2020. A escola como espaço de participação social e promoção da cidadania: a experiência de construção da participação em um ambiente escolar. *Saúde em Debate*, 44(esp 1), 64-78. Recuperado de <https://www.scielo.br/j/sdeb/a/CsNW46x3dHLFDSgLDFH4FLB/?lang=pt>
- González, M. A. A. 2001. Stress: temas de psiconeuroendocrinologia. São Paulo: Robe Ed-Belma Ed Imp Exp Ltda.
- Gusmão, C. A. 2016. Educação profissional técnica de nível médio integrada ao ensino médio: a perda do caráter profissionalizante? Dissertação de mestrado. Universidade de Brasília, Brasília, DF, Brasil. 40
- Landstedt, E. & Gadin, K. G. 2012. Seventeen and stressed: do gender and class matter? *Health Sociology Review*, 21(1), 82-89.
- Lipp, M. E. N. & Malagris, L. E. N. 2001. O stress emocional e seu tratamento. In B. Rangé (Org.). *Psicoterapias cognitivo-comportamentais: um diálogo com a psiquiatria* (pp.475-490). Porto Alegre: Artmed.
- Lipp, M. E. N. 2003. Mecanismos neuropsicológicos do stress: teoria e aplicações clínicas. São Paulo, SP: Casa do Psicólogo.
- Lipp, M. N. 1996. Pesquisas sobre stress no Brasil: saúde, ocupações e grupos de risco. Campinas: Ícone. Machado, S. F., Veiga, H. M. S. & Alves, S. H. S. 2011. Níveis de estresse em alunos de 3ª série do ensino médio. *Universitas: Ciências da Saúde*, 9(2), 35-52. Recuperado de <https://www.jus.unic.eub.br/cienciasaude/article/view/1362>
- Minayo, M. C. S. & Sanches, O. 1993. Quantitativo-qualitativo: oposição ou complementaridade? *Cadernos de Saúde Pública*, 9(3): 239-262.
- Paggiaro, P. B. S. & Calais, S. L. 2009. Estresse e escolha profissional: um difícil problema para alunos do pré-vestibular. *Contextos Clínico*, vol (2). Recuperado de <http://pepsic.bvsalud.org/pdf/cclin/v2n2/v2n2a04.pdf>
- Pereira, M. B. & Tricoli, V. C. 2002. A influência do meio ambiente e de práticas parentais na vulnerabilidade ao stress. In M. Lipp (Org.). *Mecanismos neuropsicofisiológicos do stress: teoria e aplicações clínicas* (pp. 67-70). São Paulo: Casa do Psicólogo. Psicologia escolar e educacional.
- Peruzzo, A. S., Cattani, B. C., Guimarães, E. R. & Boechat, L. C. 2008. Estresse e vestibular como desencadeadores de somatizações em adolescentes e adultos. *Psicologia e argumento*, 26(55), 319-327, doi: 10.7213/rpa.v26i55.20003
- Santos, É. 2019. A educação como direito social e a escola como espaço protetivo de direitos: uma análise à luz da legislação educacional brasileira. *Educação e Pesquisa*, 45(e184961), 1-15. Recuperado de <https://www.scielo.br/j/ep/a/8pQkJ9rFx8ClKswHFwPpVTG/?lang=pt>
- Sodré, E. N. 2017. Processos de escolarização, sofrimento psíquico e medicalização da vida. In F. Negreiros & M. P. R Souza. (Orgs.). *Práticas em psicologia escolar: do ensino técnico ao superior* (1ª ed., vol. 2, pp. 167-178). Teresina: EDUFPI.
- Tabaquir, M. L. M., Bosshard, C. A. G., Prudenciatt, S. M. & Niquerito, A. V 2013. Vulnerabilidade ao estresse em escolares do ensino técnico de nível médio. *Estudos de Psicol*, 30(4), 517-524. Recuperado de [http://pepsic.bvsalud.org/scielo.php?script=sci\\_arttext&pid=S1415-711X2015000100013](http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1415-711X2015000100013)
- Tomasello, M. & Call, J. 1997. *Primate cognition*. Nova York: Oxford University Press. 41
- Tricoli, V. A. C. & Lipp, M. E. N. 2006. Manual da escala de stress para adolescentes: casa do psicólogo. São Paulo: Casa do Psicólogo.
- Tricoli, V. A. C. 2005. A criança e a escola. In M. E. N. Lipp (Org.). *Crianças estressadas: Causas, sintomas e soluções* (pp.123-148). Campinas: Papyrus.
- Vieira, M. F, e Silva, C. M. S. 2020. A educação no contexto da pandemia de COVID-19: uma revisão sistemática de literatura. *Revista Brasileira de Informática na Educação* (Brazilian Journal of Computers in Education), 28, 1013-1031. Recuperado de <https://www.br-ie.org/pub/index.php/rbie/article/view/v28p1013>

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