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RELATIONSHIP BETWEEN SCREEN TIME AND ANXIETY LEVEL IN PSYCHOLOGY STUDENTS

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ABSTRACT

The following article presents an analysis of the association between screen time and anxiety levels in psychology students based on the results obtained in data collection. The research was developed based on the analysis of the use of screens specifically in students of the psychology course The problematization arising from the extensive use of screens directly influences mental health, altering the levels of normal anxiety that can susceptibilize a pathological state that causes imbalance in psychological, cognitive and physical performance. In addition, there is the possibility of generating screen-dependent behavior. Thus, the text aims to have an explanatory character in view of the construction of initial hypotheses and the understanding of the constructs. As a result, we have that the habits of use involve both sensory stimuli, such as luminosity, and dopaminergic stimuli from social networks, which are potentially harmful to social well-being, especially in anxiety levels, also scoring the potential for a pathological condition if there is no psychological intervention.

Keywords: Screen time, Anxiety level, Mental health.

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INTRODUCTION

An issue that is very much discussed in the globalized world is the indiscriminate use of electronic devices, which can generate several negative consequences. Recently, the use of screens has become not only a psychological problem, but also a health problem in general, which has occurred along with technological advances and the increasing need for technology in everyday life. Electronics are present in all aspects of modern life, from work, studies and obligations, to leisure and "rest".

It is observed that technology has currently been placed in new stages of human development, such as in childhood, which is immensely harmful to formation. In this way, when the individual is already inserted in society and has his social role, non-standard anxiety can be a very serious consequence of the abuse of the use of screens. In this context, it is even more interesting to note how this issue directly affects future psychology professionals, current students.

Young people are entering University at an increasingly early age, and in this period, the individual's transition from adolescence to adulthood, is marked, as Fernandes, 2024, by physical, mental, emotional, sexual, and social changes. Emotional and mental development is deeply impacted by the environment, so they have a more vulnerable mental health, causing higher rates of depression and anxiety at this stage (Magson*, et al.,* 2021).

There are many areas in which technology is employed, but practically all of them are present daily in the lives of psychology students. Today, if it is necessary to search for an item, contact family or friends, play games for distraction, watch movies or listen to music, technology is an ally. Therefore, it is clear that the time of screen use is extensive and lasts almost the entire time when awake, with at least 30% of young people using more than two devices simultaneously, when the recommended time for safe use for health is 3 hours (Giedd, 2020).

In the neurological context, it is important to emphasize that the brains of young people are still in the development phase, and for this reason, more vulnerable to external stimuli, which can intensify compulsive behaviors, such as the exacerbated use of screens. In a social context, it can be highlighted that this phase of development is marked by a search for greater autonomy, which leads young people to avoid parental control, leading to a difficulty in monitoring the use of screens (Caldeira *et al.,* 2022). This whole context leads

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to damage to sleep quality, generating excessive worries and, as a consequence, high levels of anxiety.

Anxiety is a normal and inherent condition of the human being, it is a defense mechanism that works in favor of self-preservation, that is, it is an adaptive condition of life, but when experienced in an exacerbated way it can bring great suffering to the individual. It is a diffuse feeling of fear, related to situations that are not present in the environment, non-concrete situations or that still have a potential to happen. This feeling can be accompanied by physical sensations (excessive sweating, tachycardia, hyperventilation), catastrophic thoughts about the future, producing dysfunctional ways of adjusting to the environment. Thus, this mental condition, if it alters the patterns of behavior and quality of life in a harmful way, is at a pathological level.

Fernandes *et al*., 2024, present that anxiety is a mobilization of biological resources that prepares the body to respond to an attack situation. However, if it lasts for a considerable time and is disproportionate to the context, it becomes pathological. In the context of the Covid-19 pandemic, concern about home confinement increased symptoms of generalized anxiety (Hawes, *et al.*, 2021).

Depression, another highly prevalent and severe disorder, is characterized by feelings of sadness, discouragement, and loneliness (Hafstad, *et al*., 2022). These symptoms were felt by hundreds of thousands of adolescents due to the Covid-19 pandemic, which impacted several segments of these young people's lives, whether in interpersonal relationships or even access to media information (Magson, *et al.,* 2021).

And a longitudinal study done by Shoshani, *et al*., 2022, noted that during the Covid-19 pandemic, 18% of children and adolescents had depressive symptoms and 23% had anxiety symptoms. In addition, children and adolescents who were physically active during the pandemic were less likely to have depressive symptoms, while students with more computer screen time were more likely to have depressive and anxiety symptoms.

Costa, *et al*., 2024, shows that social isolation, linked to emergency remote teaching (ERE) caused by the coronavirus, as effective as they were in reducing the spread of the virus, negatively affected the lifestyle of several populations, especially the university community, which was harmed in several dimensions, such as the reduction in the level of physical activity (PAL) (Oliveira *et al*., 2021) and Quality of life (Abdullah *et al*., 2021) and increased feelings and traits of anxiety (Freitas, *et al*., 2021).

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Because of the ERE, several educational institutions closed during the pandemic, and the academic community stopped moving to these places and walking in these spaces. In addition, with the implementation of the ERE there was an increase in screen time and many hours in a sitting position without breaks to exercise. These factors, alone or together, contributed to increasing physical inactivity among university students (Mocanu *et al.,* 2021; Zheng et al., 2020).

Bedim *et al.*, 2024, also points out that controlling the use of screens, maintaining a low period, mitigates strong exposure to blue light, keeping the release of melatonin regulated (Wahl *et al.,* 2019), and that this may be associated with an impact on the person's level of physical activity. During and after the COVID-19 pandemic, studies have shown that sleep quality (Alimoradi *et al.,* 2021), physical activity level (PAL), and sedentary behavior, especially screen time (TT), were altered (Guilherme *et al.,* 2023).

Today's society has normalized and become hostage to an instrument that, in principle, should be used in a healthy way, only to help human potential. Thus, the association between screen time and anxiety in psychology students is an extensive agenda that comes from contexts external to the individual, and based on this, the objective was to study, in general, the impacts caused by this habit on psychology students from various academic institutions in the state of Mato Grosso do Sul.

METHODOLOGY

The research was developed based on the analysis of the use of screens specifically in students of the psychology course, therefore, our study was not restricted to the student's educational institution or to the semester attended at the time the form was answered.

It refers to a survey consisting of 12 objective questions, which was carried out by form through the *Google Forms* platform and disseminated in virtual media to students, which constitutes a non-probabilistic self-selection sampling, which is the most appropriate and easy to apply.

A sample size of 100 individuals was stipulated, starting from a population of Psychology students at UFMS. This research concerns a basic nature, as its results were used for a theoretical organization based on other scientific productions that describe this theme, so its approach is explanatory, as it sought to identify and classify information that correlates and delimits a cause-effect analysis. Regarding the approach, it was based on quantitative data to compose the analysis, and produce a descriptive statistic, which

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involves the organization and synthesis to represent the collected material. In this case, the results served as an initial parameter for the investigation of the study hypothesis, assuming particular information from each unit that made up the statistical basis of the sample to compose a general analysis.

Ethical issues were considered in the research: it made sure to obtain the informed consent of all research participants. They were informed about the objectives of the research and the procedures involved. The privacy of the participants was protected and the confidentiality of their information was guaranteed. All the information collected was kept confidential and access was limited only to the researchers involved. It was ensured that the selection of participants was fair and impartial, avoiding any form of discrimination. The collected data was used in a responsible and ethical manner. The participants agreed to participate in the research by signing the free and informed consent form present in the questionnaire.

When the participant accessed the form link, the ICF initially appeared, which clarified all bioethical aspects and then the form; only after the acceptance of the ICF was the student directed to the data collection form.

RESULTS AND DISCUSSIONS

The following study was carried out through questions that include: the age profile of psychology students, the semester they are in, the average daily screen time, the use of mechanisms to limit screen time and the effects caused by anxiety, these were measured based on the GAD-7 test (Generalized Anxiety Disorder 7). Anxiety is characterized by the feeling of panic that arises from constant worry, however, this problem is drastically accentuated with the excessive use of screens due to the multiple stimuli arising from electronic devices. It is inferred through the research that most of the students in the course are aged between 15 and 25 years, which reveals the profile of a hyperconnected generation.

After conducting this study, it is evident that there is a high rate of anxiety among students, while 51% of the interviewees have concerns about situations that have not yet happened, 29% stated that they have an imbalance in dealing with their feelings, in addition to the difficulty of resting. In this context, it was observed that about 48% use screens for a period of 3 to 5 hours and 34% use 6 to 7 hours a day, thus, it is admitted that it is

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conducive to the development of a vicious relationship regarding the use of devices by young people.

It is understood that the association of excessive use of devices points to the need to use mechanisms to limit screen time, since this tool is little used among the interviewees, however, it corroborates mental health and the control of anxiety levels so that it does not become a disorder. The pathological state of anxiety is characterized by a disproportionate reaction to stimuli, this reaction manifests itself in an excessive way in the form of fear, worries and feelings of irrational panic, which configure Generalized Anxiety Disorder (GAD). In addition, exaggerated exposure to screens can cause irritability, hyperactivity, tension, discomfort and even apprehension about negative feelings.

In view of the data presented, it is noted that 63% of the individuals do not use any mechanism to limit the time of use of devices, which shows that there is a need to use them to complete academic tasks such as: research, reading, study and the preparation of papers, however, it is essential that there is control of the use in order to preserve the mental health and well-being of the students. Too much exposure can cause an increase in anxiety levels and consequently causes changes in sleep quality as it compromises the secretion and production of neurotransmitters such as dopamine, in addition to promoting sudden mood swings and anxiety crises. It can be inferred from the study that 79% of the students consider themselves to be anxious people, therefore, it is notorious to investigate the potential influence of exaggerated time on the level of anxiety of psychology students.

From a meticulous analysis of previous studies, it is found that there is a rate of influence on the level of anxiety on the level of anxiety caused by the excessive use of screens. The prevalence of anxiety symptoms in students who make indiscriminate use of screens is examined. Due to today's demands, it is known that the use of devices has become a necessity and current habits have changed due to this demand. In the current context, practically any task requires the use of electronic media, which has shaped the needs and social behavior of individuals. As a result of such demands, the use of devices in an exaggerated way has been normalized, which contributes to the neglect of mental health.

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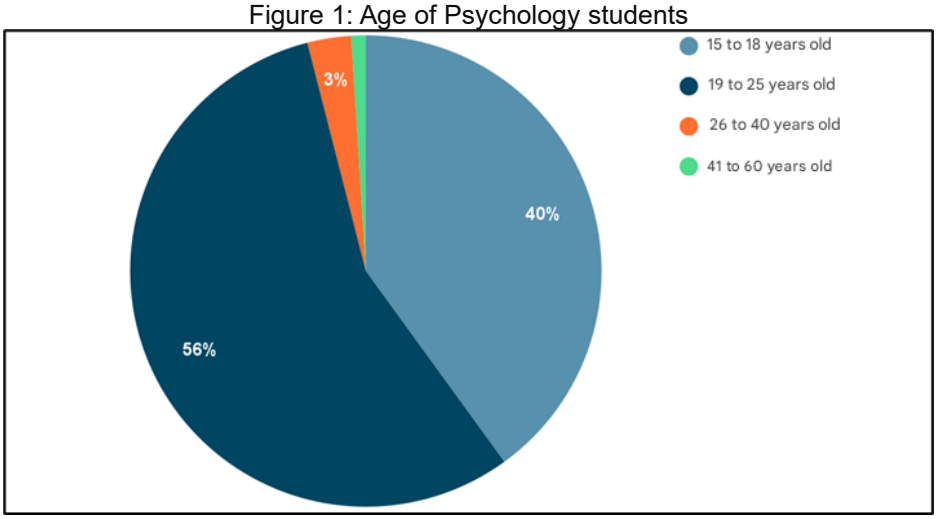
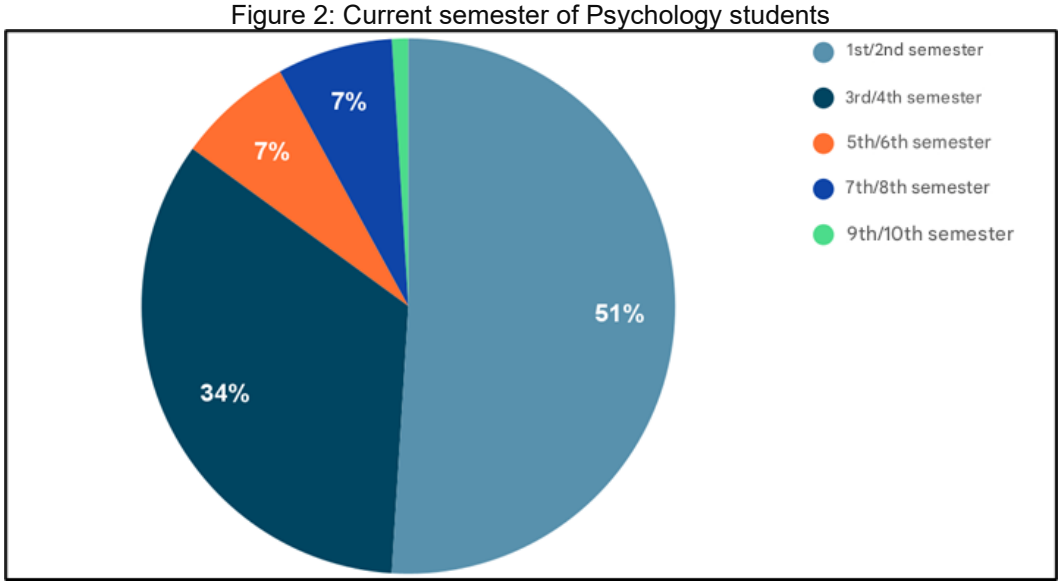
Figure 1: Age of Psychology students



Source: Survey data

Figure 1 shows the prevalence of a young sample, in view of the profile of psychology students, it is also possible to see that most universities are composed of young students, as people over 40 years of age were rarely noticed. Considering the results of our research, we obtained 40 students aged between 15 and 18 years, 56 aged between 19 and 25 years, 3 aged between 26 and 40 and 1 aged between 41 and 60 years; In addition, no academic over 60 years of age responded to the survey.

Figure 2: Current semester of Psychology students



Source: Survey data

It is noted through the results obtained and Figure 2, that there is a concentration of students at the beginning of the course, this indicates that most of the people reached by the form started college recently, that is, in the year 2023 or 2024. This concentration can

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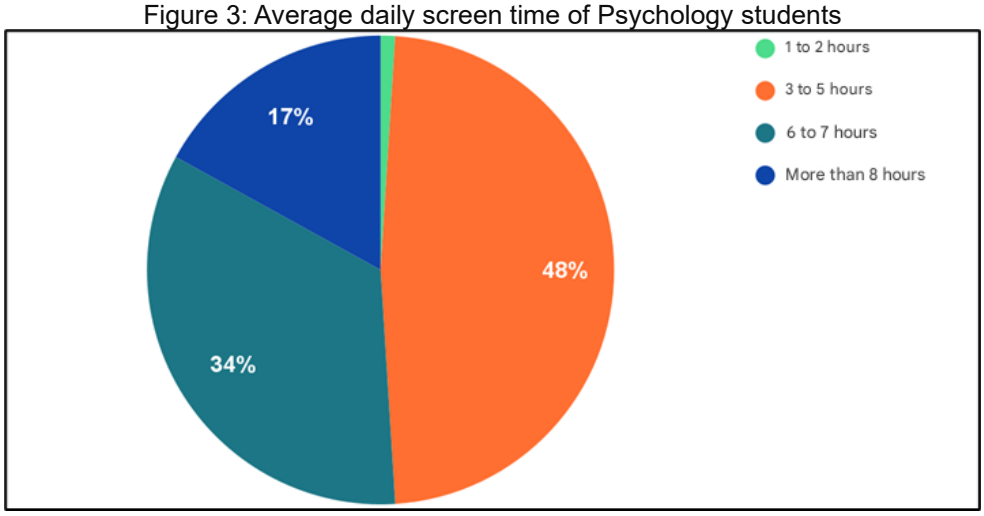
demonstrate the engagement of scholars in the production and collaboration of research. Starting with the analysis of the answers reached, we have: 51 people in the first/second semester of college, 34 in the third/fourth, 7 in the fifth/sixth, 7 in the seventh/eighth and 1 in the last year.

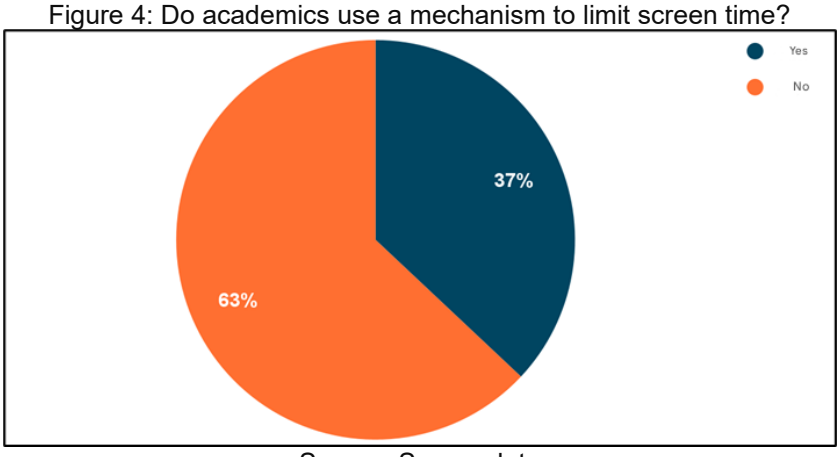
Figure 3: Average daily screen time of Psychology students



Source: Survey data

The data collected by the study show the high rate of daily time spent on electronic devices presented by students, as previously mentioned, the young age profile reinforces the connected behavior of the target audience of the research. From the information collected in our research, it can be observed in Figure 3 that only 1 person uses the screen for a period of 1 to 2 hours a day, while the others have a relatively higher screen consumption. It is noted, then, the use of devices for 6 to 8 hours as being high, therefore, the students interviewed make excessive use of screens.

Figure 4: Do academics use a mechanism to limit screen time?



Source: Survey data

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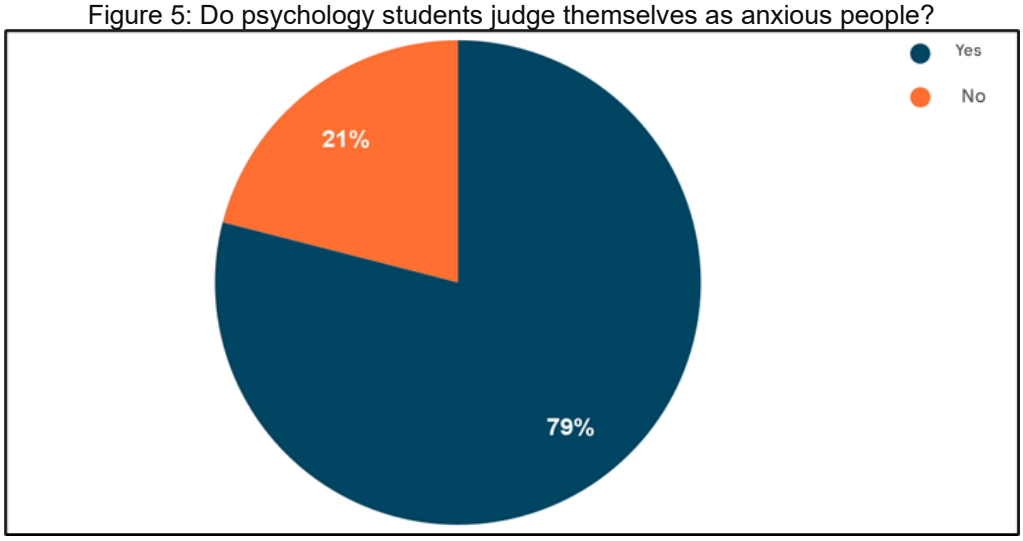
Through the answers counted, the lack of use of tools to control the time of use of devices by students was highlighted. This scarcity is noted by the analysis of Figure 4, which demonstrates the negative effects of not using timers through the high number of screen consumption.

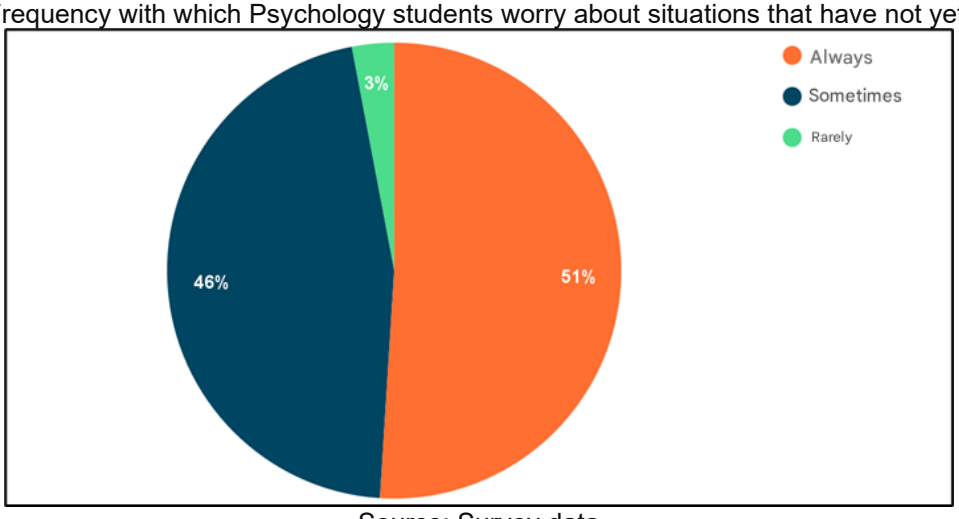
Figure 5: Do psychology students judge themselves as anxious people?



Source: Survey data

A critical self-analysis was carried out by the students themselves in relation to anxiety, based on the results of the study and Figure 5, the sample of students is predominantly anxious. It can be deduced that these 79 people live with the symptoms and discomfort that anxiety causes, so it becomes relevant to pay attention to the effects that the use of screens can add to the anxious state. In view of this, the high result of people with anxiety shows concern about the mental health of psychology students.

Figure 6: Frequency with which Psychology students worry about situations that have not yet occurred.



Source: Survey data

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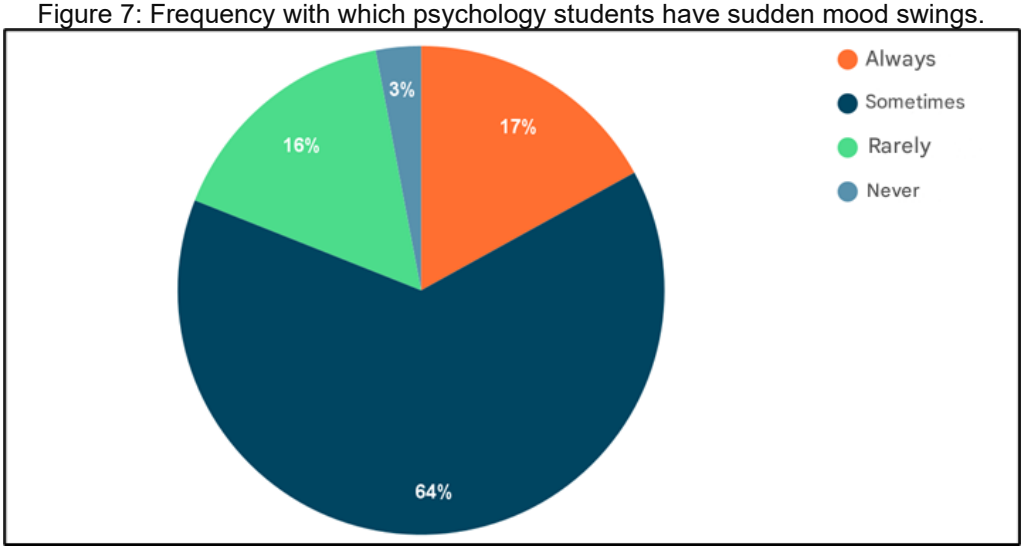
Regarding the incidence of one of the symptoms caused by anxiety, worry, which causes discomfort and restlessness. Worry is normal to a certain level, it ceases to be normal when it triggers a series of disorders in the individual, since it promotes the feeling of constant distress. Based on the data collected and observing Figure 6, it is notorious that this symptom is present in the lives of most students, since 51 people answered that they always feel this sensation and another 46 feel it, but sometimes.

Figure 7: Frequency with which psychology students have sudden mood swings.



Source: Survey data

About the sudden mood swing, it is consistent with the anxious state in which there are sudden mood swings without an apparent explanation, they are usually associated with situations of great pressure or stress. The sample of data, together with Figure 7, reveal that the profile of the students on this point indicates a little more balance compared to the other answers, this time the number of individuals who always show suffering from mood swings is lower, corresponding to 17%, while the majority - 64% - report that they sometimes feel this sensation.

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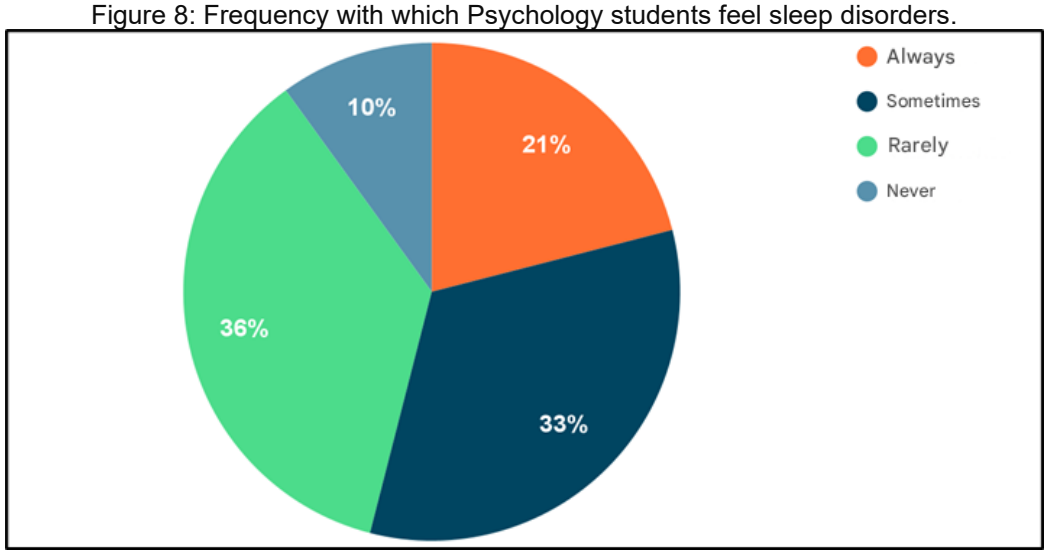
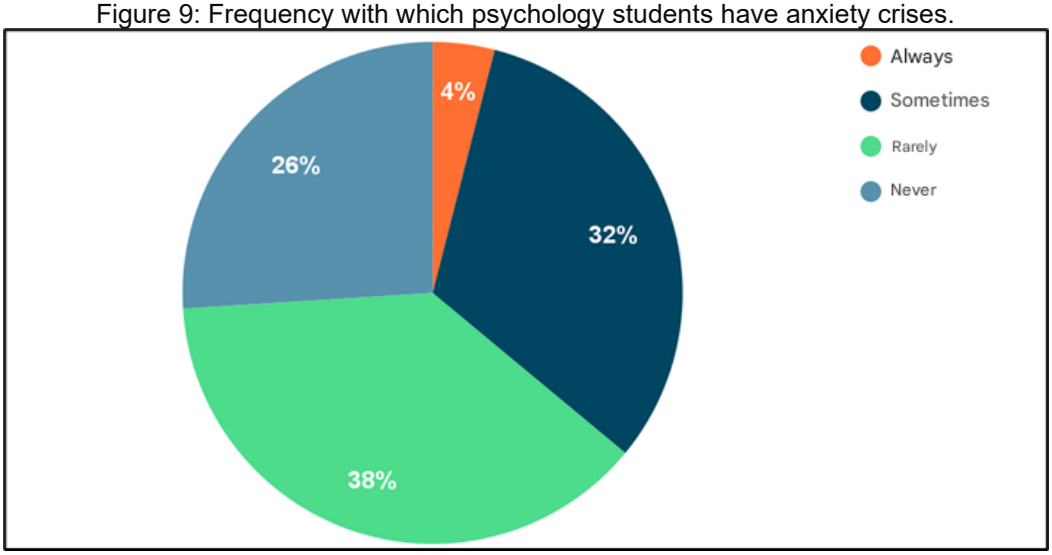
Figure 8: Frequency with which Psychology students feel sleep disorders.



Source: Survey data

The research in question sought to investigate the frequency with which students have some alteration in sleep, the data proved to be quite balanced since anxiety can lead to complications in sleep quality, as can be seen in Figure 8. Excessive use of screens over a long period of time can trigger excessive stimuli to the brain, which compromises the secretion of some hormones and neurotransmitters responsible for sleep quality, such as: melatonin, adenosine, dopamine and serotonin. In fact, the use of screens before bed can cause a dysregulation in the production of these hormones and neurotransmitters. However, the data from our survey show the frequency with which students feel changes in sleep, 21% correspond to always, 33% to sometimes, 36% to rarely and 10% to never.

Figure 9: Frequency with which psychology students have anxiety crises.



Source: Survey data

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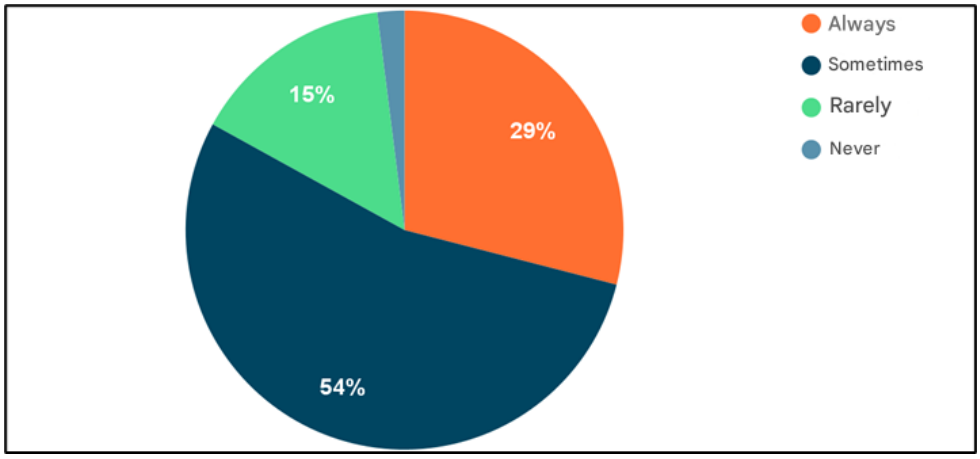
Anxiety crisis represents the state in which the main symptoms of anxiety are very intensified, including both physical and psychological symptoms. The anxiety crisis can be triggered by stimuli that generate a lot of discomfort, acting as a trigger to provoke the symptoms of anxiety more pronounced. Thus, it is understood that the exaggerated use of screens can act as a trigger for anxiety crises. Regarding the results of our research, we noticed that the constant incidence of anxiety crises among students is reduced, corresponding to only 4%, however, the manifestation is still sometimes in 32%, rarely in 38% and never in 26%.

Figure 10: Frequency with which psychology students find it difficult to deal with the feelings that their worries cause.



Source: Survey data

Anxiety can provoke excessive worries so that the individual finds himself agitated due to afflictions. There is a feeling of constant fear and this instigates nervousness with generalized situations, the individual remains with the feeling that something is going to go wrong and this accentuates the concern for something that is not real. It is observed in the study and in Figure 10 that most students sometimes feel this difficulty - which corresponds to 54% of the interviewees.

Tiredness, on the other hand , is due to the difficulty of relaxing, this is also related to the quality of sleep and the amount of stimuli absorbed during the day. Anxiety can lead to difficulty sleeping, which consequently causes tiredness, in addition, a bad night's sleep corresponds to the failure of a series of physiological processes necessary to maintain the individual's well-being. The sleep process plays a very important role in the establishment of health, during sleep there is the action of neurotransmitters and the organization of important information for memory. Therefore, it is verified that this feeling is recurrent

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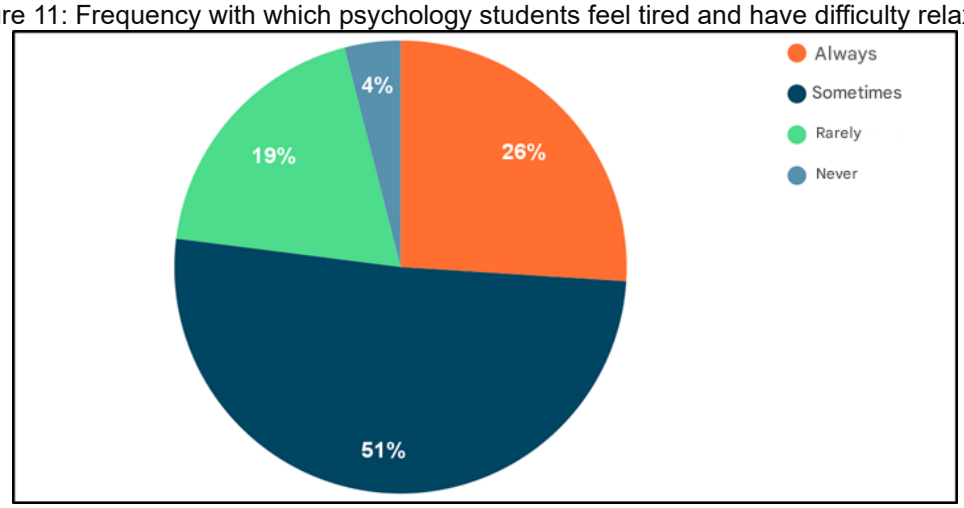
among some of the students, since about 26% always feel difficulty and 51% feel it sometimes.

Figure 11: Frequency with which psychology students feel tired and have difficulty relaxing.



Source: Survey data

FINAL CONSIDERATIONS

In short, the indicators presented in the study point to the state of frequent dependence on screens and virtual media and the derived imbalance in anxiety levels. In addition, the research intended to give importance to the theme of mental health, considering the growing technological evolution and the consequent dysfunction in society's ways of life. Thus, it becomes difficult for users to distinguish the use of the media in a context of need, whether professional or personal, or in a vicious relationship and without estimating the expenditure of time, which can create a cycle of procrastination and increased anxiety for not being able to carry out their duties.

Finally, the habits of use involve both sensory stimuli, such as luminosity, and dopaminergic stimuli from social networks, which are potentially harmful to social well-being, especially in anxiety levels, also pointing out the potential for a pathological condition if there is no psychological intervention in order to promote alternatives that stimulate mental well-being.

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