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NOMOPHOBIA AND THE IMPACT OF TIKTOK USE ON ADOLESCENTS' BEHAVIOR

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ABSTRACT

The study aimed to identify the impacts of nomophobia on adolescent behavior from the use of TikTok. This is a qualitative study with a non-probabilistic sample. Data collection took place from March to April 2023, through a questionnaire with sociodemographic questions and aspects about the use of TikTok, the Brazilian Version of the Nomophobia Questionnaire (NMP-Q-BR), and the Internet Addiction Test (IAT). Thirty-seven adolescents between 12 and 18 years of age participated in the study. It was found that 56.8% of adolescents have moderate nomophobia and 16.2% have severe nomophobia, in addition, females are the most homophobic. Adolescents who have been using TikTok for more than a year have a moderate or severe degree of nomophobia. It is concluded that more research into the harmful consequences of Nomophobia and the use of TikTok among young people needs to be done to help those who are already affected by this problem to have a more balanced and healthy life.

Keywords: Adolescents. Behavior. Addiction. Social Network. Smartphone.

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INTRODUCTION

This research addresses the issue of nomophobia based on the use of TikTok in adolescent behavior and arose from the need to seek to understand the impacts and consequences of this situation in their daily lives. The rapid spread of smartphones has transformed the way we communicate, educate, entertain ourselves, and how we behave in front of screens. The group that has been most impacted by this digital transformation are children and adolescents, as they are still developing executive functions in the brain, such as impulse control, self-regulation, and future thinking. Thus, they have a greater risk of triggering a problematic form of interactive media use (Young; Abreu, 2019). Thus, with the popularization of smartphones, a new addiction emerged: nomophobia. The term nomophobia originated in England, being inspired by the expression no-mobile, which means “without a cell phone”. This expression, associated with the Greek word phobos, which means phobia or fear, succeeded the term nomophobia. Thus, nomophobia is the individual's anguish or fear of being unable to communicate through digital means, that is, the phobia of being without a cell phone, computer, and/or internet (King; Nardi; Silva, 2014).

Although nomophobia is not yet included in the International Classification of Diseases and Related Health Problems (ICD 11) (WHO, 2019) or in the Diagnostic and Statistical Manual of Mental Disorders (DSM-V TR), published by the American Psychiatric Association (APA, 2023), its effects on people's health and behavior lead researchers to study the subject.

In Brazil, the Continuous National Household Sample Survey (PNAD) conducted in 2021 found that among the devices used to access the internet at home, cell phones were used by 99.5% of people. Furthermore, the percentage of people who used the internet in the 10 to 13 age group was 82.2%, and in the 14 to 19 age group the percentage was 91.8%. In the category of adolescents who had a cell phone for personal use, the percentage was 51.4% for the 10 to 13 age group, rising abruptly to 81.3% for the 14 to 19 age group (Brazilian Institute of Geography and Statistics, 2022).

In conjunction with the advancement of smartphones, digital media has also gained more prominence in society, providing an open space for creating and sharing content on the most diverse topics. One of these main social networks is TikTok, created in May 2017, has gained great global relevance and stands out from other social networks by offering a space for video production, in addition to being a space where users can watch new and

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random content from unknown people from all over the world (TikTok, 2022). The infinite scrolling format is part of the characteristic design that allows videos to be watched vertically without pauses, thus attracting a young audience that can spend hours with their eyes glued to their cell phone screen.

A survey conducted with 2,651 children and adolescents by the Regional Center for Studies for the Development of the Information Society (Cetic.br) on the use of the internet by children and adolescents in Brazil showed that the use of social networks is one of the online activities that has grown the most among children and adolescents in the country. In 2021, 78% of Internet users aged 9 to 17 accessed social networks, an increase compared to 2019 (68%). In addition, the study showed that TikTok is the main social network used by 34% of Internet users aged 9 to 17 (Cetic.br, 2021). Thus, there are still few studies in Brazilian literature regarding the impacts of the use of TikTok by adolescents, despite the growing importance that this platform has been demonstrating, and the impacts of nomophobia on adolescent behavior. Given this, the guiding question of the research was: “What are the impacts of nomophobia from the use of TikTok on adolescent behavior?”. The interest in the topic is justified by the perception of a relatively new issue for Psychology, manifested in a few studies in Brazil that correlate Nomophobia with the use of TikTok by adolescents.

It is understood that young people have a vast entertainment tool at their disposal, due to the advancement and dissemination of cell phones and the creation of social networks that generate infinite and fast content. Thus, this research intends to contribute to the production of studies that seek to discuss the cognitive, emotional, and behavioral impacts that cell phones and the excessive use of TikTok can have on the development of adolescents. It can also be an aid in the clinical practice of the psychologist when treating a patient with this specific demand. Based on such considerations, the objective of this research was to identify the impacts of nomophobia from the use of TikTok on adolescent behavior. Specifically, the objectives were: to investigate the prevalence of Nomophobia in adolescents in the scientific literature; to verify the effects of Nomophobic behavior on the adolescent brain; and finally, to analyze how Cognitive Behavioral Therapy (CBT) intervenes in cases of Nomophobia.

A brief reference will be presented below regarding Nomophobia and smartphone addiction in adolescents and the cognitive impacts of Nomophobia and TikTok on

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adolescents. The role of psychology in the demands of Nomophobia through the CBT approach will be presented and discussed in the results and discussions section.

THEORETICAL FRAMEWORK

NOMOPHOBIA AND SMARTPHONE DEPENDENCE IN ADOLESCENCE

With the increasing advancement of digital devices, new technologies have emerged, producing personal, social, family, and behavioral impacts on human daily life. Given this scenario, being without a smartphone can have severe effects on the psychological well-being of some individuals, so it was necessary to create a term that could identify certain behaviors, feelings, and sensations arising from this interactivity. Nomophobia is considered a disorder of the modern world and was created to describe the feeling of anguish, discomfort, anxiety, and nervousness when faced with the possibility of losing or being without a cell phone or other communication devices (computers, tablets, or smartphones) (King; Nardio; Silva, 2017).

According to Yildirim and Correia (2015), nomophobia is structured in four dimensions or main causes: (1) fear or nervousness about not being able to communicate with other people; (2) fear of not being able to connect; (3) fear of not being able to access information and (4) fear of giving up the comfort provided by mobile devices.

Technologies are constantly evolving and interacting with human beings. Given this, the benefits of these devices are countless; however, greater attention is needed to the harmful effects resulting from an abusive relationship with smartphones. Spending more than three hours a day on a smartphone and age have been linked to problematic cell phone use, so younger smartphone users are more likely to become dependent on the device. In addition, spending more time on a smartphone has been associated with higher levels of nomophobia, which means that the subject has a greater fear of being without a cell phone the more they use it (Kaviani et al., 2020).

Adolescence is the age group most susceptible to suffering from nomophobia, as well as other symptoms such as internet addiction (Rojas-Jara et al., 2018). Young people are at risk of becoming dependent on permanent connections due to their greater contact with these technologies and their age of intense biological and psychological transformations. In addition, technology can become a factor of social isolation, which compromises the ability of adolescents to socialize, who can no longer distinguish reality

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from the virtual world. This dependence can cause several disorders, disturbances, and addictions related to virtual overdose (Silva; Silva, 2017; Young; Abreu, 2019).

The smartphone can be a channel for connection, learning, belonging, and inclusion and as a relatively new term, the classification of nomophobia is contested by some authors. For Kaviani et al (2020), classifying the fear of being without this device as a phobic disorder limits and pathologizes cell phone use. Despite this, Bragazzi and Puente (2014) suggested that nomophobia be included in the DSM-V, but the same authors emphasize that some issues are still open for further studies, such as comorbidities.

The symptoms observed in those with nomophobia are anxiety, anguish, nervousness, tachycardia, tremors, excessive sweating, and changes in breathing, among others. Individuals most likely to develop nomophobia are those who generally have some anxiety disorder (King, 2014). Nomophobia can be considered a non-substantial behavioral addiction. Similar to substance use, it produces short-term rewards and has harmful consequences due to the reduced control that the subject has over his or her behavior. Excessive use of technology is a real and current problem that seriously affects individuals, especially young students, due to their age group (Bianchessi, 2020).

For a behavior to be characterized as addictive, it must impact one or more aspects of life (relationships, work, academic performance, health, finances, or legal status). Even if addiction to the internet, smartphones, or social networks does not cause structural damage to the brain, its harmful effects occur due to the excessive time spent with technology (Young; Abreu, 2019). Given this technological revolution, it is necessary to pay attention to the possible impacts of smartphones and the social networks that comprise them.

COGNITIVE IMPACTS OF NOMOPHOBIA AND TIKTOK ON ADOLESCENTS

Digital technologies offer adolescents a variety of simultaneous information, with countless tabs open in the browser along with smartphones that frequently vibrate with notifications. Many attractions can make it difficult to concentrate on a given activity. As a result, we have a more distracted and immediate generation (Silva; Silva, 2017). During this phase, adolescents can also engage in risky, fearless, and aggressive behaviors, thus, the plasticity of the networks that connect the brain regions is fundamental to understanding this period of life. Their actions can be understood as originating from short-

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range reasoning, that is, derived from a process of brain maturation that is still unfinished (Young; Abreu, 2019).

The main characteristic of the adolescent brain is its ability to change in response to the environment, this brain plasticity and adaptation is a topic of discussion arising from the digital revolution. Computers, video games, cell phones, and apps have profoundly affected the way adolescents learn, play, and interact in recent years. A wealth of information is available on a wide range of apps (Giedd, 2015).

During this period, the full development of different regions of the adolescent brain occurs at different times. The prefrontal cortex, which is crucial for executive functioning, including organization, decision-making, planning, and impulse control, does not mature until the age of 20. Unlike the prefrontal cortex, the limbic system, which is responsible for regulating emotions and feelings of reward, intensifies during adolescence. These two regions interact with each other to promote the search for novelty, risk-taking, and interaction with peers. Given this, the maturational incompatibility between them increases the difficulty in controlling impulses or judging risks and rewards, facilitating the propensity for risky behaviors, such as drug and alcohol abuse, and excessive use of technology, among others (Giedd, 2015).

Given this scenario, one of the symptoms of nomophobia is considered uncontrollable access to social media and, as a result of this, there is a progressive discouragement from work, school, family, and social life (Bianchessi, 2020). Thus, with the advancement of the internet and smartphones in recent years, the video-sharing industry has been transformed. One of the biggest trends is the emergence of short-form video platforms, the main example being TikTok, which has gained popularity worldwide, becoming the most popular app in 2019 and 2020 and having 1.2 billion monthly active users in 2021. The age group of 10 to 19 years old represented 28% of users in 2021 and Brazil is one of the main markets for the app (Iqbal, 2022). A study using brain MRI in 30 individuals showed that the use of TikTok can cause significant problems in approximately 5.9% of its users. For example, the negative relationship between TikTok use and self-control indicated problematic behavior, an aspect seen in other behavioral addictions. In addition, personalized videos that are recommended by the platform's algorithm according to the user's taste activate areas of the brain, such as the Ventral Tegmental Area (VTA), a region that is the origin of some dopaminergic pathways and plays a role in the reward circuit, and subregions of the Default Mode Network (DMC), an area involved in the

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processing of different cognitive functions. Thus, the recommendation algorithm can discover content that regulates the activity of a set of subregions: DMC and DMC, attracting the individual's attention and reinforcing the behavior of continuing on the platform (Su et al., 2021). The main mechanisms for establishing addiction are an intensification in the activation of the brain's reward pathways followed by the release of dopamine, a neurotransmitter associated with reward and seeking behavior (Young; Abreu, 2019). When the reward pathways are constantly and intensely stimulated, they desensitize and stimulation becomes increasingly essential to seek pleasure, reinforcing the behavior and sustaining the addiction (Niehaus; Cruz-Bermúdez; Kauer, 2009). In their study, Zhang et al (2019) found some factors that cause TikTok addiction. One of them is personalization, the application offers face filters, creative effects, and video editing tools and the algorithm recommends personalized and infinite content that aligns with users' interests based on their browsing history and preferences in their For You (for you). The other factor associated with addiction is entertainment, short-form videos inspire creativity and provide entertainment and recreation to users. Users. In addition to the characteristics associated with the platform, personal characteristics such as anxiety about social interaction and a tendency towards social isolation contribute to addiction to the app.

Excessive use of digital screens leads to a progressive loss of the ability to perform deeper mental activities, in addition to psychologically and neurobiologically impacting the brains of individuals, especially adolescents. Another impact that screens have is on sleep, which is necessary to maintain well-being and the consolidation and performance of learning and memory. Adolescents use electronic devices during the day and night, even when they are already in bed, significantly delaying the sleep cycle (Young; Abreu, 2019).

The Internet provides a highly stimulating and rewarding environment, providing activities that do not require physical presence; this space becomes attractive to adolescents, encouraging them to remain connected for long periods. This process of continuous reinforcement activates the reward part of the brain's mechanisms, which can lead to compulsive behaviors (Young; Abreu, 2019). Therefore, health professionals must be able to help these individuals reestablish healthier psychological functioning.

METHODOLOGY

This is a qualitative study, which seeks to understand the phenomena from the perspective of the participants and the context of the situation studied and is analyzed in an

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integrated manner (Godoy, 1995). The technique used to collect data is a survey, using a previously structured online questionnaire to understand aspects related to the behavior of the group being studied. A survey is used to directly question a significant group of people and to understand their behavior through some type of questionnaire (Prodanov, 2013).

STUDY SAMPLE

The research sample is characterized as non-probabilistic for convenience, based on the availability and willingness to respond to the survey. The use of non-probabilistic sampling on the internet is valid since it represents a promising data collection method due to the high number of responses, the ease of collecting responses, and the savings in time and money (Oliveira, 2001). In addition, this type of sample does not require statistical rigor, being used in exploratory or qualitative studies (Prodanov, 2013).

The research participants were adolescents between 12 and 18 years of age. The age range chosen is justified by the fact that it is a period of changes in development and because it is the phase established by Brazilian legislation (Law 8,069, 1990). The inclusion criteria for the participants were adolescents who were between 12 and 18 years of age, had a cell phone with internet access, and frequently used the social network TikTok. The exclusion criteria were people who do not fit into the established age range, such as children and adults.

RESEARCH PROCEDURES

Data collection was carried out in the first half of 2023. The research was first publicized through digital media, such as email, Instagram, WhatsApp, and Facebook, in which the theme of the research project and its objectives were presented, inviting participants to participate in the research and providing the researcher's cell phone number to contact. After the person interested in participating in the research contacted the participant, the telephone number of the adolescent's parents/caregiver was requested, if the adolescent was under 18 years old, so that a link to a form containing the authorization form could be sent to the guardians. This step was mandatory so that the participant could later access the research instruments.

After the guardian's authorization, through the Free and Informed Consent Form (FICF), another link was sent, through which the participant first had access to the Free and Informed Assent Form (FICF) to confirm their authorization to voluntarily participate in

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the research. Upon agreeing to participate, participants were directed to the questionnaires. All data collection instruments were computerized in the Google Forms tool, a free platform offered by Google, providing access to participants from different locations and electronic devices (computer, cell phone, tablet). Participants were informed that the researcher(s) of the study were committed to preserving the privacy of their data.

The instruments used in data collection were: two questionnaires and a test. Questionnaires have become a widely used research instrument for collecting data in various areas in which the opinion of a given population on a specific subject is investigated. In addition, the agility of application, control, and tabulation of responses; flexibility and diversity The main advantages of the online questionnaire are ease of preparation, speed of completion, and low or no implementation costs. (Vasconcellos; Guedes, 2007).

The form organized by the researcher was divided into four sections. The first consisted of the TALE. The second had sociodemographic and socioeconomic questions regarding income, gender, age, name, education, and marital status of the participants, as well as questions regarding general aspects of the use of TikTok, such as daily usage time, reasons for access, and the impacts of use on the adolescent's routine. The third section consisted of the Brazilian Version of the Nomophobia Questionnaire (NMP-Q-BR) and the third, the Internet Addiction Test (IAT).

Nomophobia was measured using the Brazilian Version of the Nomophobia Questionnaire (NMP-Q-BR). This instrument has 20 questions, all based on a 7-point Likert scale: from 1 “completely disagree” to 7 “completely agree.” This scale has been validated for Brazilian Portuguese (Rocha et al., 2020). According to the authors, the interpretation is based on the number of scores scored. The total scores are calculated by adding the responses to each item, resulting in a nomophobia index ranging from 20 (minimum) to 140 points (maximum), in which the results can be classified as follows: less than 20 points: absence of nomophobia; 21-59: mild level of nomophobia; 60-99: moderate level of nomophobia; and 100-140: severe nomophobia.

The Internet Addiction Test – IAT (Internet Dependency Test) was also used, a test translated and adapted to Portuguese to measure different degrees of internet addiction (Conti et al., 2012). This is a testing instrument with 20 objective questions, each with five possible answers: 0- Not applicable, 1- Rarely, 2- Occasionally, 3- Frequently, 4- Almost always, and 5- Always. This instrument assesses mild, moderate, and severe levels of

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Internet addiction. To obtain a final score, the numbers selected for each answer are added together; the higher the score, the greater the level of addiction and the problems caused by Internet use. The classification is based on the following criteria: 0-30 – normal, 31-49 – mild addiction, 50-79 – moderate addiction, and 80-100 – severe addiction. After participants answered the survey, the Google Forms tool generated a database, automatically creating an Excel spreadsheet with the data obtained. Bardin's content analysis (2016) was used to analyze the data. The use of content analysis involves three fundamental phases: The first is pre-analysis, a phase identified by the organization, in which the materials to be analyzed are chosen, hypotheses are formulated, objectives are constructed, and indicators that will guide the final interpretation are developed. The second phase involves the exploration of the material, where the results are coded, enumerated, and categorized. The third and final phase consists of the processing of the results and interpretation so that the data are treated in a way that is meaningful and valid. This study was evaluated and approved by the Research Ethics Committee (CEP) of the Universidade Franciscana (UFN) under opinion number 5,943,175.

RESULTS

In this research, a sample of 37 adolescents was obtained. According to the sociodemographic data, there was a predominance of females (78.4%) and males (21.6%). The most common age group among adolescents was 17 years old (24.3%), followed by 16 years old (21.6%), 18 years old (16.2%), 15 years old (16.2%), 14 years old (13.5%), 13 years old (5.4%) and 12 years old (2.7%). Among the 37 participants, 78.4% were in high school, 18.9% in elementary school, and 2.7% in college. Most adolescents have a monthly family income greater than one minimum wage (73%), (18.9%) preferred not to answer, (5.4%) earned one minimum wage and (2.7%) less than one minimum wage.

Regarding the use of TikTok, we sought to investigate how long the adolescents had been using the application. Thus, it can be seen in Graph 1 that the majority of participants (89.2%) have been using TikTok for more than one year, 8.1% have been using it for less than six months and only 2.7% have been using it for one year.

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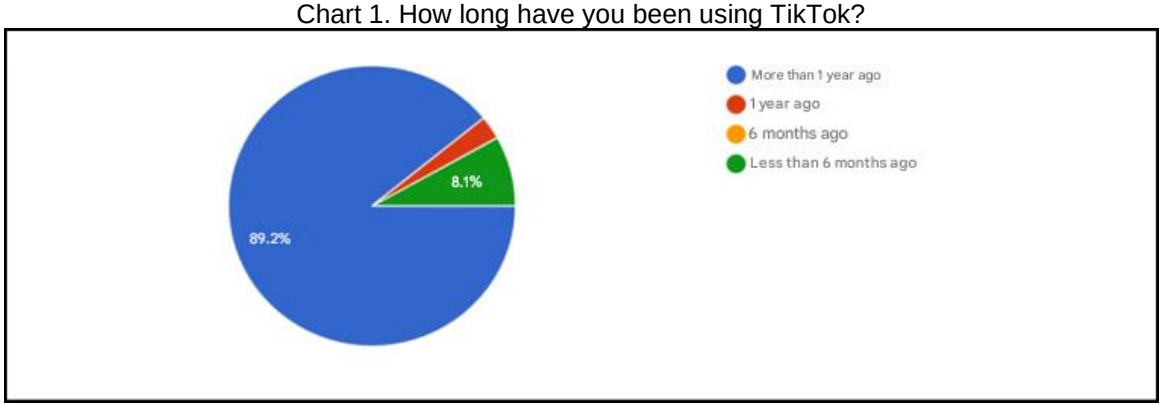
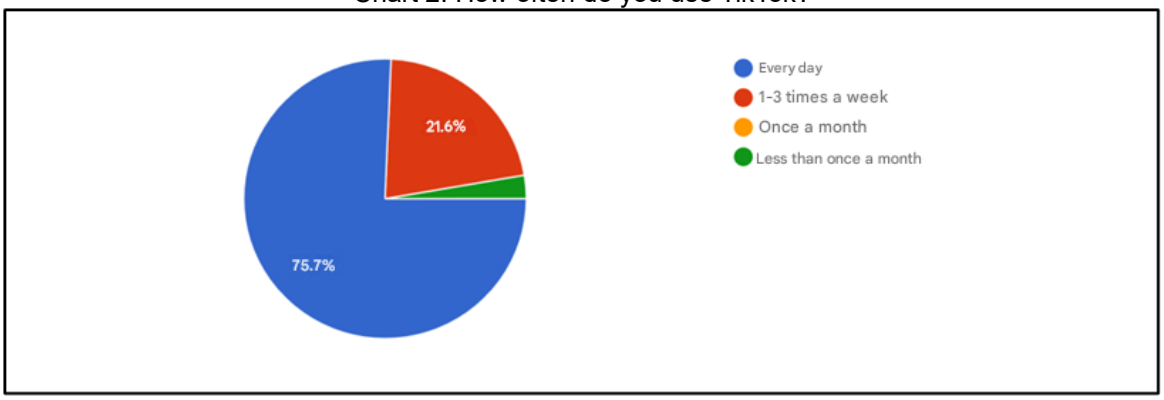
Chart 1. How long have you been using TikTok?



Regarding the frequency of TikTok use, most teenagers (75.7%) use it every day, 21.6% use it 1-3 times a week and 2.7% use it less than once a month. This data can be seen below in Chart 2. It is also interesting to note that the 27 participants who indicated that they use the app every day have been using TikTok for over a year.

Chart 2. How often do you use TikTok?



We also sought to investigate the time spent using the social network daily. Graph 3 shows that 51.4% of teenagers use TikTok for more than one hour, 29.7% for 1 hour, and 18.9% for between 15 and 30 minutes. In addition, those aged 16 and 17 were those who had the longest daily use time, spending 1 hour or more per day on the app.

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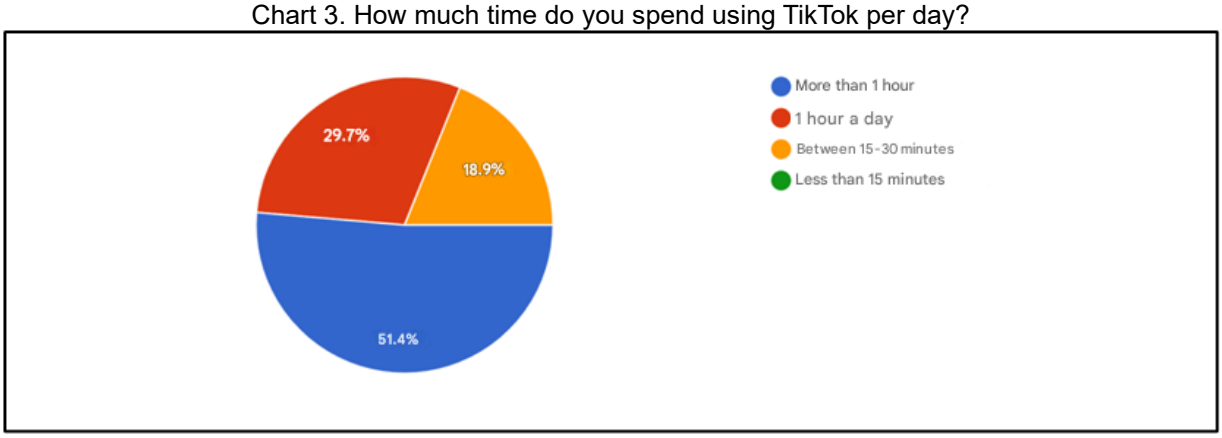
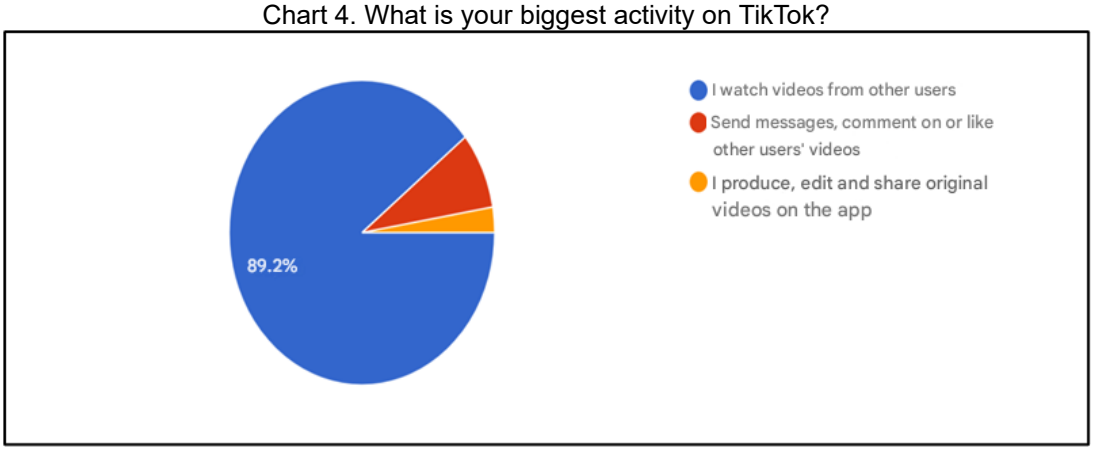
Chart 3. How much time do you spend using TikTok per day?



Regarding activities carried out on TikTok, watching videos from other users is the most prevalent activity for 89.2% of participants, sending messages, commenting, or liking videos from other users is the biggest activity for 8.1% and only 2.7% of the sample produces, edits and shares original videos on the app (Graph 4).

Chart 4. What is your biggest activity on TikTok?



Regarding the motivation(s) for using TikTok, the most prevalent activities were: I use TikTok to watch content that interests me (86.5%), I use TikTok when I'm bored (83.8%) and I use TikTok to relax (59.5%). Regarding what participants feel and perceive when using TikTok: 75.7% say they notice that time passes more quickly, 62.2% have fun when using the app, 54.1% notice that they lose track of time or place when using TikTok and 35.1% feel that the amount of time they spend on TikTok has negatively impacted their studies or work.

The majority of adolescents (97.3%) presented some degree of nomophobia: 24.3% with a mild level; 56.8% with a moderate level, 16.2% with a severe level, and 2.7% with no nomophobia (Table 1). Regarding the age range of participants and the score on the level

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of nomophobia, adolescents aged 16 and 17 were those who presented the highest degree of nomophobia (moderate and severe). Of the 27 adolescents who had moderate or severe nomophobia, 18 were female and 6 were male.

Table 1. Level of Nomophobia among Adolescents by NMP-Q BR

Level of Nomophobia among Adolescents	N	%
Mild	9	24.3
Moderate	21	56.8
Severe	6	16.2
None	1	2.7

Source: Original data from the research.

On the DI scale, there is a predominance of mild symptoms (43.2%), followed by normal symptoms (27%) and moderate symptoms (24.3%). Only 5.4% presented severe internet dependency, as seen in Table 2. Additionally, adolescents aged 16 and 17 showed the highest levels of DI (moderate and severe).

Table 2. Degree of Internet Dependency by IAT

Degree of Internet Dependency	N	%
Normal	10	27
Mild	16	43.2
Moderate	9	24.3
Severe	2	5.4

Source: Original data from the research.

DISCUSSION

It was observed in this study that, despite the growing academic interest in investigating issues arising from smartphone use, research on nomophobia and TikTok use in Brazil is still scarce compared to other parts of the world. When comparing with studies conducted with adolescent samples, the number of studies is even more limited. In the literature, nomophobia studies are mainly conducted with young adult and university student samples (Notara, 2021). The study conducted by Da Silva (2024), involving university students, aimed to analyze how nomophobia and focused distraction affect teaching and learning in higher education. The results showed that students' attention was constantly diverted during classes due to the indiscriminate use of mobile devices. This behavior significantly compromises the learning process, emphasizing the need to develop diversified and innovative methodological strategies to mitigate the negative effects of focused distraction.

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Regarding the results of the present study, 56.8% of adolescents (12 to 18 years old) showed moderate nomophobia characteristics, and 16.2% showed severe nomophobia. Indian researchers reported that 21.86% of high school students aged 14 to 17 had a moderate degree of nomophobia, and 5.1% had a severe degree (Sharma, 2019). In the study conducted by Durak (2018) with Turkish elementary and high school students, about 49% of participants scored as problematic nomophobia users (moderate and severe).

Regarding gender, this research showed that females were more homophobic (moderate and severe levels) than males. This supports the findings of Kuscu (2020), which indicated that women are more likely to exhibit homophobic behaviors than men. These results contrast with those of Durak (2018), who found more men with nomophobia. In terms of age group and nomophobia levels, adolescents aged 16 and 17 had the highest degree of nomophobia (moderate and severe). High school students tend to have higher levels of nomophobia, indicating that the level of nomophobia increases with age (Durak, 2018).

The IAT results in the present study showed a predominance of mild dependency and a low prevalence of the more severe degree of IAT. Moreover, adolescents aged 16 and 17 had the highest levels of internet dependency (moderate and severe). In a study conducted with students from Japan, mild symptoms were also predominant (76.3%), with moderate degree prevalence at 21.7%, and 2.0% having a severe degree (Kawabe, 2016).

Results on TikTok usage showed that the app is used by adolescents for relaxation or fun. User motivation is consistent with the studies of Shao and Lee (2020), which showed that TikTok is mainly used for entertainment. We found that the most common activities done on the app by the sample are watching videos from other users, sending messages, commenting, or liking other people's videos.

Regarding how participants feel and perceive TikTok use, most stated that they lose track of time, feel time passes more quickly, and that it has already negatively impacted their studies or work. One of the consequences of excessive digital media use reported in Spina's research (2021) was low academic performance and insomnia. Additionally, TikTok's algorithms predict users' interests, offering videos continuously, which keeps them engaged in the app, having fun, and losing track of time (Zhao, 2021).

In the present study, all participants who used the app for an hour or more, and for more than a year, exhibited moderate or severe nomophobia. No studies were found

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linking nomophobia to TikTok use. However, according to Durak (2018), the use of Information and Communication Technologies (ICTs) predicts nomophobia in adolescents. No significant relationships between internet dependency and nomophobia were found in this research. However, according to Kara (2019), as smartphone use increases in adolescents' daily lives, they feel lonelier and more anxious, which leads to homophobic behavior.

According to the authors cited throughout the research, young people are at higher risk of becoming dependent on connection due to the intense biological and psychological transformations they undergo during this phase. Zhao (2021) states that adolescents may have a low perception of the risks related to social media addiction. Furthermore, their brains are still developing, making them curious about the environment and often lacking self-control (Qin, 2022).

In light of this new concept, nomophobia presents a limited number of treatment methods. The proposed treatments consist of a combination of psychotherapy and medication. CBT (Cognitive Behavioral Therapy) has been suggested as an effective treatment for nomophobia, although randomized trials are currently lacking (Bragazzi & Puente, 2014). In a case study, an individual with social phobia developed nomophobia, and treatment in this case consisted of medication, CBT, and the use of assessment instruments. The individual responded satisfactorily to medication and CBT, resulting in reduced computer use and increased exposure to real-life situations (King, 2013).

Thus, psychologists working with CBT can use various cognitive and behavioral techniques to help patients confront their phobic symptoms. In these cases, CBT can help assess through techniques such as Socratic questioning, cognitive restructuring, social skills training, and gradual exposure to contribute to overcoming these obstacles (King; Nardio; Cardoso, 2014).

FINAL CONSIDERATIONS

This article aimed to identify the impacts of nomophobia through TikTok use on adolescent behavior. The results indicated that more than half of the adolescents exhibited a moderate or severe degree of nomophobia. It was observed that all participants who used TikTok for an hour or more and more than a year presented a moderate or severe degree of nomophobia. However, the IAT results showed a predominance of mild dependency.

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Despite the progress made, it was found that the field of nomophobia is still underexplored, especially in the Brazilian context. Therefore, there is a need for more research to investigate the harmful consequences of this condition among young people. Additionally, it is recommended to develop studies focused on interventions based on Cognitive Behavioral Therapy (CBT) to address both nomophobia and excessive TikTok use. These approaches could provide effective support for individuals affected, promoting more balanced habits and a better quality of life.

This study has some important limitations. Being exploratory in nature, it paves the way for new investigations but involved a limited sample of 37 adolescents within the 12 to 18-year age range. Future studies could extend this age range to include children, given the increasing use of mobile devices among this younger group. This would allow for a better understanding of the impacts of nomophobia across different stages of child and adolescent development and help propose more comprehensive interventions.

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