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THE PARTICULARITIES OF ANXIETY IN ADULTS IN THE DIGITAL ENVIRONMENT

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The use of the Internet and social networks occupies an important part of a person's life, in a universe dominated by advanced modern technology and positively or negatively influences both children, adolescents and young people but also adult users, so that it has become almost impossible to dissociate it from our daily activity. The digital age has radically transformed the way adults interact, work and spend their free time, generating new stress factors known as digital anxiety which is a state and not a trait. The main determinants of anxiety in adults in this context are structured on three areas of interest, namely permanent interconnection, online social pressure and information overload.
Keywords: *digital age, social networks, anxiety, adults, factors, mental health, behaviour.*

PARTICULARITĂȚILE ANXIETĂȚII LA ADULȚI ÎN MEDIUL DIGITAL

Utilizarea internetului și a rețelelor sociale ocupă o parte importantă a vieții unei persoane, într-un univers dominat de tehnologie modernă avansată și influențează pozitiv sau negativ deopotrivă copii, adolescenți și tineri, dar și utilizatorii adulți, astfel că s-a ajuns aproape că nu se mai poate disocia de activitatea noastră zilnică. Era digitală a transformat radical modul în care adulții interacționează, muncesc și își petrec timpul liber, generând noi factori de stres cunoscuți sub denumirea de anxietate digitală care reprezintă o stare și nu o trăsătură. Principalii factori determinanți ai anxietății la adulți în acest context sunt structurați pe trei zone de interes și anume: interconectarea permanentă, presiunea socială online și suprasolicitarea informațională.
Cuvinte-cheie*: era digitală, rețele sociale, anxietate, adulți, factori, sănătate mintală, comportament.*

Introduction

We naturally ask ourselves what are we exposing ourselves to with digitalization and the answer is that no one can predict it, but it is certain that the rapid changes in human behavior in the last decade in how we communicate and compare ourselves to each other are broader and deeper than we can imagine [4, pp. 10-11]. It is one of the reasons why serious research is being undertaken today on the effects of digitalization on the human brain. Hansen (2022) states that not only digital habits have changed but also our current habits so that we have become more sedentary, we sleep less and stress is different from that of the past. In evolutionary terms, humans have made major changes in the environment in a few thousand or even hundreds of years, which is very little on the scale of the history of the evolution of the human race, but the current changes of the digital age challenge us to the limit of the statement that "we evolved for something else and we are not synchronized with the times in which we live" [3, p. 23].

The digital age and the challenges of anxiety

The modern era has seen numerous technological revolutions, namely Industry 1.0 - steam power, Industry 2.0 - electricity and mass production of consumer goods, Industry 3.0 - the use of computers and the Internet. They represented the foundation for Industry 4.0 and Industry 5.0 and have become a part of each of us's reality, changing the way we think, feel or behave. What Klaus Schwab called the „Fourth Industrial Revolution" or „Industry 4.0" [11, p. 12] came with new concepts already assimilated into current language such as the Internet of Things (IoT), Big Data and Cloud Computing, Artificial Intelligence (AI), Digital Twins. This period is characterized by the transition to Industry 5.0 which emphasizes sustainability, resilience and collaboration between the individual and technology. In other words, the industrial age has been replaced by the digital age, which will shape our existence even more in the coming years, so that the individual's presence on the network becomes a palpable and necessary reality.

Of course, all these transformations and adaptations carried out in a very short period of time and with an evolution that has a high degree of unpredictability produce an anxiety that the digital age has called digital anxiety, which has become a major challenge in the personal and professional areas. For the period of „Industry 4.0" there are a series of particularities in terms of manifestation and sources such as job insecurity due to technology and artificial intelligence, negative stress generated by the inability to cope with the use of new technologies or the feeling of overwhelm due to the huge amount of information that we can or cannot process in real time, the overlap of the professional and personal plan and this was especially visible during the pandemic period, the continuous effort to learn, the pressure to achieve professional performances in a competitive regime, mental fog and cognitive fatigue or digital isolation. For the Industry 5.0 period, we can also considered series of particularities in terms of manifestation and sources, such as anxiety resulting from direct collaboration between humans and robots, which means real-time performance and anticipated and expected behavior in the personal workspace, anxiety generated by creativity, empathy and critical thinking compared to technology that cannot currently replicate such human characteristics, tactile anxiety generated by augmented reality, ethical and decision-making anxiety, especially in relation to professional activity where the consequences are amplified by technological hyperconnectivity and, last but not least, anxiety generated by monitoring the work environment and the functioning parameters of the human body for high professional yields.

The impact of digital technologies and the Internet on our daily lives, from what we are and do to what we feel and think, is huge and represents an object of study for different disciplines such as sociology, philosophy, economics, neuroscience or psychology [11, p. 15]. In applied psychology, a new field of specialization emerged towards the end of the 1990s, namely digital psychology or cyberpsychology, "an interdisciplinary scientific field that focuses on psychological phenomena that arise as a result of human interaction with digital technology, especially the Internet" [11, p. 11]. Cyberpsychology is an emerging field that investigates human interaction with computers, mobile phones, virtual reality and video game consoles, artificial intelligence and thus gradually contributes to a better understanding and scientific knowledge of our behaviors but also of cognition and affectivity in relation to modern technology. In this sense, the relationship between man and technology is a two-way street: technology influences human cognition and behavior, but personality and social structure also shape technological use and acceptance [9, p. 321]. The Internet has become so widespread that we have access to a huge amount of information and goods without moving or leaving our homes and has expanded the ways of social connection. The digital environment influences the maturation of our brain but also empathy as a skill that can be trained and developed. The frontal lobe matures last and plays a major role in achieving social interaction and hence the longer need to practice and gain experience. There are opinions of some authors [4, p. 141] according to which this maturation today is influenced more by the environment than by our genetics and that, in order to participate in complex social interactions, we need a training of the frontal lobe that could be compromised by the digital lifestyle. This is explained by the fact that screens hinder the development of social skills by the simple fact that we do not interact „face to face" and do not develop the ability to appreciate the thoughts, emotions, behaviors or intentions of those with whom we interact directly. On the other hand, understanding what others think or feel is the basis of authentic interpersonal relationships, of creating a climate of trust but also of developing another important skill called empathy, so that, in the absence of direct interaction, we end up abstracting without wanting the suffering of the person in front of us. The „theory of mind" capacity that Hansen brings to the table [4, pp. 122] refers to the fact that we practice continuously and that we need to observe the facial expressions, movements and body language of others, which cannot be obtained through text messages, photos or tweets. In the absence of „face-to-face" interaction, this author believes, two important human skills suffer, namely empathic concern and interpersonal sensitivity [4, p. 122] with effects on our egocentrism and obsession with status and appearance, especially among adolescents and young people.

Katzer [7, pp. 8-9] naturally asks the question of what the change in the coordinate system and the addition to the real world of virtual worlds that cannot be physically perceived but which involve the visual perception of data or images on a screen mean for us. Thus, most of the time we barely realize the need for breaks

when we are online and the more we use cyberspace, the more important it is to answer the consequences of the change in the virtual environment on each of us and the individual position in society as a whole.

The use of the Internet and social networks occupies an important part of a person's life, in a universe dominated by advanced modern technology and positively or negatively influences both children, adolescents and young people, but also adult users, so that it has become almost impossible to dissociate it from our daily activity [7, p. 1]. This use can become problematic to the extent that there is an excessive preoccupation with these networks, a need to spend more and more time here, emotional or physical discomfort, loss of control, neglect of various activities related to personal and professional life, etc. Hence the need to be aware of how they affect their thoughts, emotions and behaviors, impulsive or compulsive, respectively**,** their general health [1, pp. 57-58]. The problematic use of the Internet and implicitly of online social networks is manifested by two aspects, namely the fear of using it or its excessive use, and there is no consensus on the criteria of normality in this area, as shown by research and specialized literature, especially that in the clinical area. Defining an addiction to the Internet or other channels that use the Internet is quite difficult. Attempts have been made to assimilate it with pathological behaviors in the area of gambling disorders, and here tolerance may be a key word in the efforts to find a more adequate definition. The American Psychological Association (APA), in 2016, outlined a definition of tolerance in the context of Internet addiction, namely that it represents "a need for significantly increased amounts of the Internet to achieve intoxication or the desired effect" or "a significantly diminished effect following uninterrupted use of the same amount of the Internet" [12, p. 213]. In 2014, Andreassen and Pallessen proposed a definition of social media addiction as a manifestation of being excessively preoccupied, driven by a strong motivation, or using and devoting so much time and effort to it that it affects other social activities, interpersonal education, health and psychological well-being [12, p. 213]. Essing explains how the effects can be visible beyond the behavior itself in that individuals can no longer achieve fundamental life goals such as the ability to regulate their emotions, to form an identity, to be independent, to build self-confidence and to improve their social skills [12, p. 213].

Therefore, in the spectrum of Internet and social media use, we do not have a unified approach and consensus on what constitutes appropriate use, problematic use versus addictive use. Rocklin & Aktar [12, p. 215] point out that in general, existing studies have focused on children, adolescents and young people, but they identified two studies that found factors associated with Internet addiction in both adults and adolescents, namely socio-demographic variables, the way people use the Internet, psychosocial factors and comorbid symptoms such as mood disorders, OCD, ADHD and anxiety (social anxiety or social phobia).

A whole series of theories have been developed related to internet addiction, excessive or abusive use and they consider, depending on the research projects identified, neurobiology, social connection, attachment and relating to objects, psychology of the self, but whichever way we start to carry out an analysis, there are three elements that make the Internet a unique environment that can encourage pathological behaviors. It is a „totalizing" environment because almost everyone is connected to it, it is a „social" environment and it is an „intelligent and personalized" environment because it offers you the opportunity to learn everything about your life and your inner desires through that technology [12, p. 236].

Thus, at this time, although problematic use through abuse has characteristics similar to addiction, it is not considered a distinct disorder in the clinical area and therefore does not have a recognized scientific definition or specific therapeutic approach. To meet clinical criteria for addiction, either a biochemical or a chemical component must be identified and the person diagnosed with an addiction must demonstrate a developing tolerance and experience withdrawal. Therefore, there must be evidence that a person has an increasing need for use and this is tolerance and when they no longer have access, states of anxiety, fear, discomfort are caused, that is, withdrawal [1, p. 69].

The American Psychological Association (APA) has stated the following components as essential to declare a behavior as Internet addiction and the need for further study: excessive use associated with loss of sense of time or neglect of primary needs; withdrawal associated with depression and anxiety when the computer is not accessible; tolerance including the need to have more powerful equipment or more software programs; negative social consequences and poor school, professional or social performance [1, p. 80].

In the field of cyberpsychology, a series of psychological theories are used to understand how the individual creates, modifies and presents his or her self-image in the digital space, building multiple representations of their self towards others and these constructions can be associated with depression, anxiety or a general state of balance, as the case may be. Among these theories, the one by E. Tory Higgins (1989) called the Self-Discrepancy Theory stands out, which proposes three mental representations of the self, both from one's own point of view and from the point of view of others, that is, of significant people for us. Thus, the "real" self (who you are) or the actual self (Actual Self) – represents the attributes that a person believes they possess and the opinion that others have regarding the abilities that we have. The "ideal" self (who you want to be) (Ideal Self) – represents the attributes that a person would like to have as well as those that we believe others would like us to have. The "imperative/normative/obligated" self (who you think you should be) (Ought Self) – represents the attributes that we or someone else believes we should have. The better the Actual Self adapts to the Ideal Self or Ought Self, the less there will be conflicts between the image we have and the one we project and we will have better psychological health and self-esteem. When there are large discrepancies associated with low levels of self-esteem, there will be discomfort or there will be conflicts that can manifest themselves in the form of sadness, agitation, frustration, dissatisfaction, disappointment, guilt, etc. This creates three main directions of research that are related to mental health, online behavior and motivation. Regarding mental health, studies have shown that discrepancies between Actual Self and Ideal Self would be more likely to be associated with depression, while discrepancies between Actual Self and Ought Self would be more likely to be associated with anxiety [5, pp. 93-136]. Regarding online behavior, users can adjust their image or act freely under the umbrella of anonymity. Regarding motivation, studies have shown that a moderate discrepancy can be a driver for change, and a discrepancy perceived as large can lead to demotivation or procrastination, and here the theory of uses and rewards can help understand why we use virtual spaces and social networks, as well as the resulting personal gains. Here we must make a distinction between state anxiety and trait anxiety, namely that if in the first category the emotional state corresponds to a transient state that can occur in any person, under certain conditions, in the second we are talking about an individual, personality trait, which can manifest itself both as a predisposition to feel states of fear in the presence of stimuli that for other people are less or not at all anxiety-provoking and as a predisposition to develop conditioned fears in the presence of stimuli that are not anxiety-provoking by nature. The digital age has radically transformed the way adults interact, work and spend their free time, generating new stress factors known as digital anxiety which represents a state and not a trait. The main determinants of anxiety in adults in this context are structured on three areas of interest, namely permanent interconnection, online social pressure and information overload. Thus, according to the most recent studies, we can identify determining factors, as follows:

- Social comparison and displaying an image of perfection online where social platforms are usually ideal versions of others' lives and this mechanism can lead to the evaluation of one's own life, personal achievements, physical appearance, etc. through unfavorable comparisons with one's own reality, bringing with it feelings of inadequacy and low self-esteem, with the potential to amplify anxiety. The image of perfection online determines the cleaning of the displayed content and the editing of an idealized version of the user, excessive processing of photos or the reflection mainly of only successful moments.

- Excessive use of the internet and social networks such as Facebook, Instagram, TikTok generates a constant analysis and comparison with idealized lifestyles and can cause decreased self-esteem, feelings of inadequacy and anxiety. Abusive use is rather associated with adolescence and youth due to the lack of maturation of some structures of the central nervous system and the difficulty of controlling impulses. However, this does not mean that adults are exempt from the temptation of excessive use, but they manifest a somewhat more reserved attitude towards digital technology through the lens of accumulated experience. Then there are a series of personality traits associated with problematic Internet and social media use behaviors such as impulsivity, narcissism, low self-esteem, low self-efficacy, etc. There are also psychological or psychiatric disorders that are vulnerability factors such as social anxiety, social phobia, drug addiction, depression or ADHD. Another dimension in the area of pathology refers to cybersickness, which actually defines a condition caused by the movement of objects relative to a referent, with symptoms such as mental

fatigue, headaches, dizziness, oculomotor disorders, disorientation generated by the disagreement between the different sensory channels and the expected and experienced stimuli, which is especially found in virtual reality [2, pp. 96-97]. And last but not least, there are factors of an academic, professional or personal nature such as peer influence.

- FOMO (Fear of Missing Out) represented by the compulsive need to check digital information updates to stay up to date with the latest social events or news that generates a continuous state of alertness and anxiety and a fear of missing important events.

- Informational and cognitive overload through the continuous flow of news and notifications causes cognitive fatigue, mental fog, difficulty concentrating and anxiety related to possible global events. Informational and cognitive overload is a direct consequence of the fast pace of life and multitasking, of a volume of data and stimuli that exceeds the brain's ability to process, analyze and manage efficiently and can lead to mental exhaustion and increased cortisol levels in the body with consequences on the general state of health. A particular phenomenon also appears, namely information anxiety, when the user is blocked from achieving his goals due to stimulus overload.

- Hyperconnectivity and the need to be available is the „always connected” culture, amplified especially by working from home or by professional activities carried out outside office hours that eliminate the boundaries between personal and professional life. This can cause fragmented attention when we lose our ability to concentrate deeply due to successive interruptions at short intervals of a few minutes, anxiety through the infusion of constant doses of cortisol with the notifications received or can ultimately cause burnout and chronic stress.

- Cyberbullying and online harassment can take various forms, from insults and threats to the distribution of false or embarrassing information about a person in the public online space under the anonymity offered by digital platforms, being more difficult to stop and the information is distributed quickly and to a large number of people. They can cause anxiety or depression and are associated on a personal level with feelings of isolation and exclusion, guilt, insecurity and the impact on the community is equally worrying generating fear and distrust in the virtual space.

- Cyberchondria, transient or chronic, represents a (self)induced anxiety that can escalate during the online search for any health problem, as a (self)diagnosis procedure that can amplify the concern of people who are generally less anxious or do not have medical training [1, p.266]. The medical information we seek in the online environment is relatively easy to find and, at first glance, this activity has nothing wrong in itself but from a healthy behavior of diagnosis and treatment in the online environment it can lead to pathogenic behavior that could otherwise have been avoided by presenting to a doctor or psychologist. Cyberchondria is not a pleasant state because it is associated with unpleasant effects manifested in the form of anxiety that has the role of restoring the pathological cycle of searching for the causes of symptoms and methods of treatment. Thus, metacognitive beliefs moderate the relationship between catastrophic interpretation and anxiety about health and they may be an indicator of the tendency to monitor and control excessive thoughts, thus contributing to a cycle of maladaptive self-regulation that produces the need to continue using the Internet repeatedly and increases negative emotions [2, pp. 104-105].

- Screen addiction, sleep disorders and social isolation are those that disrupt the biological rhythm of the body but also the structure of interpersonal relationships. Excessive time spent in front of screens, especially before bedtime, disrupts sleep cycles, through exposure to blue light that inhibits melatonin secretion and this is directly associated with increased anxiety levels. Digital content keeps the brain in a state of alertness leading to fragmented sleep and insomnia, and shifting bedtime delays the moment of falling asleep and reduces the total number of hours of rest, with obvious consequences on the general state of health. On the other hand, the transformation of digital interactions into a substitute for real relationships leads to the attenuation of social skills, to conflicting relationships with those around them by withdrawing more and more into the virtual environment, resulting in, among other things, profound social isolation, depression and anxiety. The vicious circle known from the treatment of anxiety disorders, which consists of isolation, anxiety towards social connections and again isolation, is reinforced by the possibilities offered by the internet and implicitly by social networks [13, p. 225].

- The uncertainty surrounding Evolving Technologies (AI) that improve their performance through continuous learning, radically transforming the way we interact with the world, is likely to create anxiety at an individual and collective level related to loss of control, uncertainty about the professional future and the workplace, but also a technological overload.

- Demographic differences refer to the fact that young adults are often more prone to anxiety related to screen time and social networks, while older adults face anxiety related to digital exclusion due to the rapid evolution of information and communication technology.

Conclusions

The analysis of the specialized literature has shown us that the subject has been mainly researched from various aspects in relation to children, adolescents and young people who are more exposed and vulnerable than adults who show a somewhat more reserved attitude towards digital technology. Technologies are diversified and in permanent dynamics, without a correspondent in the recent past that could offer a solution for navigation and adaptation in the face of, for example, situations of instant feedback or global exposure in real time, online. In social networks there are all aspects of human experience and behavior, amplified either for better or for worse – because it is known that the inhibition threshold is significantly reduced by anonymity and physical absence. On the other hand, there are also opinions according to which these new living conditions impoverish the intrapersonal experience, bring fewer moments in which we can reflect and temporarily cover the need for meaning and fulfillment, sometimes with obvious consequences on our general state of health. Regardless of our position, we can still admit that social networks ultimately provide a basis for maintaining social relationships, communication and information exchange, for identifying users with similar interests as well as for locating content and knowledge shared by other users in various combinations of forms from forums, blogs and collaborative projects to virtual communities.

We live in the digital age and regardless of the opinions pro or con, secular or religious, regarding new technologies, they are part of our lives and we must use them in such a way that we are able to maintain our physical and mental health. Future research projects in the field of psychology that involve analyzing the above factors as well as practical ways to adjust our behaviors in and towards the online environment must take into account the theories appropriate to the scientific approach, the psychometric aspects and interpretation of the results, the ethical and deontological challenges, the emerging directions of application in different areas of social life that are reflected on three levels, namely the economic plan, the social plan and the cultural plan.

On the economic level, any research must provide those innovative tools, intended to bring a conscious and balanced approach and to support, through individual or group mechanisms, the optimization of the use of the online environment, with effects such as: limiting the time spent on social networks, awareness of negative effects and avoiding harmful comparisons, following positive and educational content, prioritizing real interactions.

On the social level, any research must contribute to a better understanding of the influence of the digital environment on the human system, providing relevant data for developing a strategy for its responsible use and awareness of the impact it has on users to ensure optimal mental health.

On the cultural level, any research must contribute to understanding how the online environment, a central element of daily life for many adults, influences them to create, consume and distribute content and interact with other users, forming important virtual communities in areas such as entertainment, marketing, health, education and even activism.

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