

Emotional regulation difficulties according to addiction to the Internet and socio-digital networks in university students

Abstract

In young Mexicans, the use of the Internet and socio-digital networks has been recognized as a mental health problem, even considering it as a means of entertainment and at the same time, a form of interaction, however, it has been recognized with certain conditions of addictive behavior reinforced by the sociocultural context. Conditions perceived as uncontrollable or unavoidable lead to inappropriate psycho-affective effects such as low self-esteem, dependence, idealization and negative comparison with a social image suggest difficulties in regulating emotions. University students maintain a higher-than-average use of socio-digital networks for various academic, social and entertainment reasons. The degree of addiction to the Internet and socio-digital networks according to the degrees of emotional regulation in university students was analyzed from an object of study. With quantitative methodology, with an empirical analytical positivist approach of non-experimental correlational design and cross-sectional temporality, 381 university students participated through a non-probabilistic sampling by voluntary subjects with informed consent. The Internet Addiction Questionnaire (Ruiz-García et al., 2022) and the Emotional Regulation Difficulties Scale [DERS] (Hervás& Jódar, 2008) were applied. For descriptive, differential and correlational analyses, the SPSS statistical software was used to elaborate the descriptive analyses. It was concluded that emotional regulation difficulties depend on the addiction to the Internet and socio-digital networks of university students.

Keywords: Socio-digital networks, Emotional regulation, University students.

Resumen

En jóvenes mexicanos el uso del Internet y las redes sociodigitales ha sido reconocido como una problemática de salud mental aun considerando como un medio de entretenimiento y a su vez, una forma de interacción empero ha sido reconocido con ciertas condiciones de conducta adictiva reforzada por el contexto sociocultural. Las condiciones percibidas como incontrolables o inevitables propician efectos psicoafectivos inadecuados como la baja autoestima, la dependencia, la idealización y la comparación negativa hacia una imagen social sugieren dificultades para regular las emociones. Los estudiantes universitarios mantienen un uso mayor a la media de redes sociodigitales por diversos motivos académico, sociales y de entretenimiento. Se analizo a partir de un objeto de estudio el grado de adicción al Internet y a las redes sociodigitales según los grados de regulación emocional en estudiantes universitarios. Con metodología cuantitativa, con enfoque positivista empírico analítico de diseño no experimental correlacional y temporalidad transversal, participaron 381 estudiantes universitarios mediante un muestreo no probabilístico por sujetos voluntarios con consentimiento informado. Se aplico el Cuestionario de Adicción a Internet (Ruiz-García et al., 2022) y la Escala de Dificultades de Regulación Emocional [DERS] (Hervás & Jódar, 2008). Para los análisis descriptivos, diferenciales y correlacionales Se manejo el software estadístico SPSS para elaborar los análisis descriptivos. Se concluyó que las dificultades de regulación emocional dependen de la adicción al Internet y a las redes sociodigitales de los estudiantes universitarios.

Palabras clave: Redes sociodigitales, Regulación emocional, Estudiantes Universitarios.

Introduction

The use of socio-digital networks represents an advantage as a means of entertainment and communication for young university students, however, it also entails disadvantages related to excessive use and constant exposure to certain types of content, since the algorithms of these digital platforms reinforce consumption-oriented behaviors and favor the acquisition of addictive patterns (Saavedra et al., 2013; The Decision Lab, 2023).

Young adults are characterized by challenges such as the development of values, socio-emotional skills, relationship building, and professional definition (Papalia & Feldman; 2012; Otero, 2024). These adaptive processes generate personal growth, develop emotion regulation skills, feelings of empathy and understanding towards others; consequently, they also present uncertainty and confusion manifested in impulsive behaviors, haste to respond to situations that need attention and concentration, variable school performance, and instability in their interpersonal relationships (Téllez, 2023). Thus, the aim of the study was to analyze the degrees of emotional regulation difficulties according to the degree of addiction to the Internet and socio-digital networks in university students.

The Internet according to Alcalá (2017) and Castells (2002) is a social system in which information is the main resource for production, management and social interaction. The connectivism proposed by Siemens (2014) is fundamental to understanding learning in the digital age, it states that it is built by multiple external sources such as virtual communities, technological networks and information systems (Saavedra et al., 2013; Celaya, 2018). According to Siemens (2014), training is no longer a fixed sequence but a distributed phenomenon that requires recognizing connections between diverse data, filtering information critically, and keeping up to date in an environment in constant transformation. Socio-digital networks are part of the processes of communication over the Internet, defined as the set of contents or interactions that take place on electronic online platforms on the Internet that allow users to observe various contents, mainly entertainment, publish and exchange information in a personal or professional way and interact with others (Arce, 2018; Rossi, 2018).

Addiction is a chronic and treatable disease when there is a malfunction of the motivational reward system in the brain structure from the consumption of certain substances or compulsive actions that has been called an addiction disease (American Society of Addiction Medicine [ASAM], 2019). On the one hand, substance addiction constitutes uncontrollable consumption of amphetamines, alcohol, tobacco, opioids, cocaine, cannabis, and certain medications such as fentanyl; while behaviors such as compulsive gambling, excessive use of the Internet, or sexual addiction, among others, are known as behavioral or behavioral addiction (Medical Dictionary, 2025). Behavioral addiction is a symptom of a pleasurable action that then becomes more important than other ordinary activities (Cía, 2013). There is a questionable use of the Internet, also called online game use disorder, it is practiced by a prolonged and uncontrolled use of this type of digital activities. This behavior generates a set of cognitive and behavioral manifestations comparable to those observed in the consumption of psychoactive substances, such as resistance, tolerance, withdrawal syndrome, and the gradual decrease in self-control regarding the time and frequency of gambling (American Psychiatric Association [APA], 2013).

From Albert Bandura's perspective, he constructs a definition called self-regulation, which constitutes a fundamental process of social and cognitive learning, through which the individual guides his or her behavior based on self-observation, personal judgment, and self-reinforcement (Kaufmann et al., 2006). According to Gross (2007), there is a personal process to modify and control different contexts, which is understood as emotional regulation. This author proposes five stages: the selection of the chosen scenario, the modification of the modified situation, attention, cognitive reappraisal and modulated response. For their part, Del Valle et al. (2020) highlighted that this ability can be exercised consciously and unconsciously when people are faced with ambiguous or uncertain situations. Emotions understood as universal experiences are intensified in the digital context, where stimuli such as alarmist news can provoke fear, and social validation can generate joy (Ekman & Wallace, 2003; Shum, 2020). This emotional amplification is explained by the fact that emotion integrates subjective, physiological, motivational, and social components which constantly interact in socio-digital networks (Reeve, 2005). In addition, as noted by Lazarus & Reevy (2007), the cognitive assessment that users make of what they see online directly influences the emotion they experience. Repeated exposure to filtered publications that highlight only qualities of others triggers a negative social comparison, affecting self-esteem and promoting emotions such as sadness or dissatisfaction (Rossi, 2018; Hernández et al., 2020). The ability to respond adaptively to emotional stimuli such as those prevalent in socio-digital networks may be weak due to a process of emotional dysregulation (Linehan, 1993).

UNESCO (United Nations Educational, Scientific and Cultural Organization) (2025), worldwide there are 254 million students who are enrolled in higher education, enrollment in Mexico amounts to 5,350,057 students in Mexico in higher education of which 4,890,145 are in professional level programs and 459,912 in postgraduate studies, whose total number of students 62.1% attend public institutions and 37.9% attend private institutions (National Autonomous University of Mexico [UNAM], 2024). According to the demographic data of Ciudad Juárez Chihuahua, out of 1,592,942 inhabitants, a third is between 10 and 24 years old considered a mostly young population (Juárez Strategic Plan, 2024), In the state of Chihuahua there remain 129,696 students registered until 2024 (INEGI, 2025) of which 36,995 in the public university of the UACJ (Universidad Autónoma de Ciudad Juárez, 2025). Data Reportal (2024a, 2024b), reported that at the beginning of 2025 there were 5,240,000 Internet users, equivalent to 63.9% of the global population (Silverio, 2025). In Mexico, more than 90% of users access these platforms daily with an average of 192 minutes of connection (Statista, 2024, 2025; Branch, 2024; National Institute of Statistics and Geography [INEGI], 2022). In the border region, Villa (2020) indicated that 94% of Juárez residents have a Facebook account, 90% use WhatsApp, 38% Instagram and 24% X before Twitter.

Background

By maintaining a greater use of the Internet we miss important moments, being subjected to our mobiles having access to these platforms known as social networks new pleasant sensations prevail from positive reinforcements. There are positive reinforcers that manage to modify our repetitive actions, in this case, by making use of these networks, our rewards are these actions such as a *Like*, comments, views or the simple content that they provide us to continue with the Scroll, this link is made and this action is repeated in the

future this with receiving the same result of gratification (Romero et al., 2021; Chen, 2022; The Decision Lab, 2023).

During the use of social networks, attention is modulated by different neurobiological mechanisms that interact in a complex way. The dopaminergic system (nucleus accumbens and ventral tegmental area) is activated by each new stimulus – such as a notification or publication – releasing dopamine and generating immediate pleasure, which reinforces the constant search for quick rewards. In turn, the dorsolateral prefrontal cortex, responsible for executive and inhibitory control, experiences cognitive fatigue in the face of information overload, reducing the ability to regulate impulses and stop automatic *scrolling*. At the same time, the amygdala and part of the limbic system are activated by emotionally intense content, capturing attention to what is new or impactful, rather than to what is relevant or reflective. Over time, these processes generate neural habituation: the brain requires increasingly flashy stimuli to maintain interest and a more compulsive use of digital platforms. Together, these neurobiological dynamics explain the effect through how social networks can interfere with regulation, promoting impulsivity, carelessness, and less consistency in sustaining focus on tasks that demand sustained cognitive effort (Amendola et al., 2019; Seo et al., 2020).

Estrada (2017) and Gómez et al. (2025) warned that algorithms on electronic platforms generate "filter bubbles" or "echo chambers" that reinforce previous beliefs and limit access to diverse information, which occurs by two mechanisms, algorithmic and social; they use algorithms that prioritize the content where the user has interacted under their preferences, while, through this social interaction, users often follow, share and communicate with those who think similarly, reducing exposure to diverse perspectives.

In this sense, Cohen and Myrick (2023) highlight that the technological possibilities of digital platforms configure an "emotional architecture" that conditions the way users experience, express, and regulate their emotions online. From this perspective, algorithms and social feedback systems –such as notifications, reactions or personalized recommendations– not only mediate information, but also direct attention to highly emotionally charged content, intensifying the affective experience and promoting the user's permanence on the platform. This emotionally stimulating environment can contribute to processes of emotional dysregulation and Internet addiction, by encouraging the search for immediate gratification and dependence on external approval. In turn, the echo chambers generated by these mechanisms reinforce homogeneous emotions and polarized reactions, limiting the emotional and cognitive flexibility necessary for adaptive regulation.

On the other hand, Novillo et al. (2024) and Morewedge et al. (2023) added that such algorithms do not necessarily reflect users' true preferences or promote their well-being, but rather seek to prolong digital interaction time. This constant exposure to homogeneous content can favor processes of emotional dysregulation, by reinforcing intense and homogeneous affective responses, as well as avoidant strategies in the face of emotional dissonance.

During childhood, there is the ability that, through modeling and interaction with significant figures, the child is allowed to internalize rules, control impulses, and regulate their emotions (Burbano et al., 2021). However, in young people this process is especially compromised by the influence of socio-digital networks, whose immediate feedback systems (external reinforcers) replace internal self-regulation and encourage impulsive behaviors, as a result of this Díaz et al. (2023), and Ibrahim et al. (2023), together with Garro et al. (2024) highlight that, in the emerging adult stage, this dynamic can manifest

187 itself in greater emotional vulnerability, social comparison, and dependence on external
188 validation.

189 Likewise, Basauri (2023) stated that the uncontrolled consumption of these
190 platforms can lead to addictive behaviors that affect different areas of their lives, while
191 Bonilla-del-Río et al. (2018) highlighted that university students are active consumers of
192 personal and academic content. Ruiz (2010) stated that it arises from the immense joy of
193 online social contact, it is what causes addiction, rather than the use of the Internet alone.

194 The consequences of poor emotional regulation in the digital context include
195 impulsivity, anxiety, emotional dependence, and symptoms of depression (Díaz et al., 2023;
196 Ibrahim et al., 2023). According to Pimentel (2025), the data reveal predisposing variables
197 such as impulsivity, poor emotional management, academic pressure, and social isolation.
198 Likewise, it is evident that university students manifest a considerable degree of
199 dependence on the use of the Internet, a phenomenon that is associated with unfavorable
200 consequences in psychological well-being, in academic function and a breakdown in
201 interpersonal relationships. Castillo et al. (2023) found significant correlations between
202 unfavorable emotional regulation and inappropriate use of interactive platforms such as
203 Instagram, these conditions are exacerbated in disabling environments, such as those
204 generated in digital interactions where criticism, social pressure, or cyberbullying prevail.
205 In other words, compulsive Internet use and other addictive behaviors can be considered
206 responses to dysregulated emotions or coping mechanisms used to compensate for
207 deficiencies in emotional regulation (Ruiz-Olivares, 2010; Germani, 2023).

208 According to Sha et al. (2022) there is subjective well-being in which the person
209 makes an evaluation according to their own judgment or conscience, since they understand
210 and manage emotions better, which reduces stress and strengthens psychological balance.
211 Along the same lines, Gatto et al. (2022) developed a BERT (Brief Emotion Regulation
212 Training) program, an online intervention aimed at young adults, which mentions that this
213 type of digital training improves emotional awareness, stress management, and regulation
214 of negative emotions, which demonstrates a positive use of the Internet.

215 The study aimed to close a knowledge gap on the use of digital social networks and
216 how university students regulate emotions in order to produce data that helps the university
217 community, educators and mental health specialists. This study is offered as a crucial tool
218 to better understand this problem and provide viable and effective solutions, given the
219 exponential development of the impact of mental health on young people through the use of
220 the internet. It was hypothesized that university students who have degrees of addiction to
221 the Internet and socio-digital networks predict the degrees of emotional regulation
222 difficulties. They can develop emotional dysregulation, lack of impulse control,
223 idealization, negative social comparison, and unfavorable biases toward the information
224 they read. Therefore, the study was guided by the research question: How are the
225 difficulties of emotional regulation according to the degree of addiction to the Internet and
226 socio-digital networks in university students in Ciudad Juárez, Chihuahua, Mexico during
227 the year 2025?

228 229 **Methodology**

230 A quantitative methodology was used, developing a theoretical framework to
231 hypothesize according to a problem posed and analyze empirical data (Hernández et al.,
232 2014). With a hypothetical-deductive and empirical analytical positivist approach, it sought
233 to generate knowledge based on the observation, measurement, and systematic analysis of

variables, guaranteeing accurate and verifiable results (Herrera, 2024; Landeros, 2009), a non-experimental design of a correlational nature was used that made possible a structured and objective description of the phenomenon, as well as the evaluation of the degree of association or change between the variables, positive or negative, analyzing their relationship separately observed in their natural environment without deliberate modification or manipulation at a single specific moment in a transversal way (Gómez & Villalobos, 2014).

To determine the sample size, a statistical analysis was applied that contemplated a reliability of 95% and a probabilistic error of 5% ($p = 0.05$). of confidence using a specialized formula, obtaining a sample size of 381 participants (Question Pro, 2025). Students enrolled in a public university between 18 and 30 years old in Ciudad Juárez, Chihuahua, Mexico, participated through a non-probabilistic sampling by volunteer subjects (Gómez & Villalobos, 2014). First, the corresponding institutional permits were obtained from a state public university institution, then invitations were made through a Google form QR in various places of the university center. The objective of confidentiality, anonymity and security of personal references was explained to those interested. Informed consent consists of a process that has as its principles both ethical and legal and fundamental, it implies that the participants fully understand what the research consists of before deciding if they want to participate (Mondragón, 2009).

The Internet Addiction Questionnaire developed by Ruiz-García et al. (2022) was used, which consists of 25 items in its final version piloted and validated with young Mexican university students, with response options from 1 to 5 in the sense of frequency, with Cronbach's Alpha of $\alpha=.917$ with the appropriate psychometric standards (Soriano, 2014), to identify six factors: (1) Tolerance and withdrawal syndrome with items 10,9,8,17 and 7; (2) Relapse and consumption control -14,23,5,22,20-; (3) Mood modification -18,19,11-; (4) Compulsive search and consumption -2,1,3,13-; (5) Salience and desire -16,15,6,12-; (6) Conflict -25,21,4,24-. The factors corresponding to substance addiction were 1, 2, 4 and 5, while the factors of behavioral addiction were 3, 5, 6. The purpose of this instrument is to estimate Internet addiction based on characteristics of substance addiction, as well as characteristics of behavioral addictions in order to recognize whether this use is considered a behavioral condition.

The Emotional Regulation Difficulties Scale [DERS] developed by Gratz & Roemer (2004), translated and modified by Hervás& Jódar (2008), was also used, which was validated by Guzmán-González et al. (2014), which exhibits a prominent internal consistency, with Cronbach's alpha coefficients outstanding at 0.91. It consists of 28 items on a Likert-type scale, ranging from 0 (never) to 4 (always) in the sense of frequency, made up of nine emotional regulation skills based on the following subscales: (1) Emotional rejection that identifies emotional responses with items 11,18,20,23,10,24 and 19; (2) Emotional lack of control that identifies limited strategies of emotional control -13,17,26,22,15,25,28,14 and 3-; (3) Emotional interference identifying impulse control difficulties -16,21,12,27; (4) emotional neglect, difficulties in goal-directed behavior -7,6,2,9-; and, (5) Emotional confusion, low emotional awareness -5,8,1 and 4.

Results

With a mean age of $x=21.2$ ($SD=3.3$) between 17 and 38 years, 381 university students participated, 69.3% (264) women and 30.7% (117) men. 91.1% (347) reported being single, 4.5% (17) married, 3.7% (14) in a common-law union and 0.8% (3)

separated/divorced. It was observed that 38.3% (146) have a dating relationship, who 42.8% (163) are in a beginner curricular level, 30.4% (116) intermediate and 26.8% (102) advanced. 39.9% (152) are part of the Institute of Social Sciences and Administration (ICSA), 22.0% (84) of the Institute of Engineering and Technology (IIT), 16.8% (64) of the Institute of Biomedical Sciences (ICB), 8.9% (34) of the Institute of Architecture, Design and Art (IADA) and 12.3% (47) of Ciudad Universitaria (CU). 2.1% (8) of the students reported an average time of use of socio-digital networks between less than one hour, 25.2% (96) 1 to 3 hours, 41.7% (159) from 3 to 5 hours, 16.8% (64) between 5 to 7 hours, 5.5% (21) between 8 to 10 hours, 4.7% (18) more than 5 hours, and 3.9 (15) more than 10 hours. The social networks that they said they used most frequently were Instagram with 73% (281) of the total sample. Tik Tok 69% (266); WhatsApp 52% (200); Facebook 50% (193); 42% (163) YouTube; 9.9% (38) Twitter; and 5% (20) others. 97% (363) of the total sample indicated using these social networks for entertainment; 73% (281) social communication; 40% (154) academic information; 15% (60) emotional expression and 3% (14) for other reasons.

With a Cronbach's Alpha of $\alpha=.947$ with 25 items, the Internet Addiction questionnaire (Ruiz-García et al., 2022) obtained robust reliability. Participants reported a mean of $x=49.0$ ($SD=15.8$) between 18 and 90 in the substance addiction indicators, while a mean of $x=30.1$ ($SD=8.9$) between 11 and 55 in the behavioral addiction indicators. The total scale showed a mean of $x=79.2$ ($SD=24$) between 29 and 145 in Internet addiction. Internet addiction resulted in low levels in 78% (297) and medium levels in 22% (84) with a higher tendency in men, separated or divorced, in a relationship and at advanced level, but without significant difference regardless of the average grades. Internet addiction increased as age increased from 17 years to 25 years ($F=1.671$, $sig=.039$).

The Emotional Regulation Difficulties Scale (Gratz & Roemer, 2004) yielded a Cronbach's Alpha of $\alpha=.926$ with robust reliability. With a mean of $x=77.0$ ($SD=21.1$) between 35 and 140, 34.4% (131) reported adequate emotional regulation, 52.8% (201) moderate, and 12.9% (49) inadequate. Difficulties in emotional regulation had a higher tendency in women, in a common-law union, with a partner, at the beginner level, but without significant difference regardless of grade point average and age.

In the correlational analyses, it was shown that the greater the degree of addiction to the Internet, the greater the degree of emotional regulation difficulties in university students ($r=.284$, $p<.001$), especially with emotional rejection ($r=.251$, $p<.001$), with lack of control ($r=.350$, $p<.001$) and with interference ($r=.243$, $p<.001$) unrelated to confusion. However, the greater the addiction to the Internet, the lower the inattention ($r=-.147$, $p=.004$). Difficulties in emotional regulation depended on Internet addiction ($b=57,289$, $t=16,021$, $p<.001$).

Conclusions

This research aimed to review the problematic use of socio-digital networks and how they affect the way young people are regulated. Along the way, it was found that the use of social networks leads to a classification of addiction in a behavioral way (Medical Dictionary, 2025; Cía, 2013), the results highlight that there is a higher degree of significance between the degree of Internet addiction and a greater degree of emotional regulation difficulties, which indicates that there is a higher degree of Internet addiction, as well as an increase in emotional regulation difficulties, agrees with Amendola et al. (2019), who pointed out that the dysfunctional use of technology is closely linked to ineffective

strategies to manage emotions, especially in this stage of adulthood. From the research and the final results, we can highlight that the use of these platforms has been, more than anything else, for entertainment, social communication and academic information, this highlights that the emerging adult stage is building skills, desires, as well as difficulties for inattention, lack of control, emotional confusion, etc. (Hervás&Jodar, 2008), as a result of this, there are certain fixations on distraction from watching short videos or, also called Short Form Videos (SFV), since a shorter duration prevails, which leads to a greater increase in Scrolling, since the content presented to them when swiping is not perceived, but they only continue to maintain this behavioral addiction (Romero et al. 2021; Chen, 2022; Basauri, 2023).

The results suggest that students tend to neglect their daily lives because they are involved in the algorithmic dynamics of platforms, where intermittent reinforcements – likes, comments or views – prolong their stay online (Romero et al., 2021; Decision Lab, 2023). This compulsive immediate reward-seeking affects attention, promotes impulsivity, and reduces inhibitory control capacity, which is consistent with neurobiological findings described by Seo et al. (2020) and Amendola et al. (2019) on alteration of the dopaminergic system and fatigue of the prefrontal cortex.

It can be perceived that young people have difficulties in regulating their emotions when making prolonged use of the Internet and socio-digital networks, which responds to a pattern of seeking immediate gratification and emotional evasion. These platforms, particularly Instagram and Tik Tok, promote constant exposure to visual stimuli (Peña et al., 2025), positive reinforcement, and social comparison, generating emotional dependence and affecting psychological well-being (Díaz et al., 2023; Ibrahim et al., 2023). In this sense, digital consumption becomes a maladaptive coping mechanism in the face of negative emotions, as Gross (2007) and Linehan (1993) argue when referring to dysregulation as the difficulty in modulating responses to intense stimuli.

Both Sha et al. (2022) and Gatto et al. (2022) agree that emotional intelligence and emotional regulation strategies are fundamental elements for well-being, especially in contexts where emotional demands are high, such as in the university environment. From the perspective of Sha and collaborators, an adequate understanding and management of emotions allows us to cope with stress and maintain psychological balance; while Gatto and his team show that the use of digital programs aimed at emotional training can strengthen these skills and favor a more conscious use of online platforms. In this sense, their contributions allow us to understand that, when young university students have difficulties in emotional regulation, the use of the internet and socio-digital networks can become a space of escape or amplification of discomfort; however, if they are used for educational or therapeutic purposes, they can be transformed into valuable tools for emotional development and subjective well-being.

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