

OUTSOURCING EMOTIONAL REGULATION: THE USE OF SMARTPHONES AND THE WEAKENING OF HUMAN MEDIATION

A TERCEIRIZAÇÃO DA REGULAÇÃO EMOCIONAL: O USO DE SMARTPHONES E A FRAGILIZAÇÃO DA MEDIAÇÃO HUMANA

LA SUBCONTRATACIÓN DE LA REGULACIÓN EMOCIONAL: EL USO DE LOS TELÉFONOS INTELIGENTES Y EL DEBILITAMIENTO DE LA MEDIACIÓN HUMANA



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**Werlen dos Santos Alves¹, Emerson José Mayer², Carla Lima de Moraes Cabidel³,
Tatiana de Castro Nogueira Vargas⁴, Carla Andréa Manenti Botechia⁵, Marcia Andréia
dos Reis Tosta Valente⁶, Sinara Linhares Veloso⁷, Larissa Mansk Ferreira⁸**

ABSTRACT

This article analyzes digital dependence in contemporary culture from the perspective of its articulation with emotional regulation processes, with an emphasis on the outsourcing of these functions to smartphones. It starts from the premise that, in the age of hyperconnectivity, these devices have been incorporated as mediators of emotional experience, playing regulatory roles in the face of negative affective states. In this context, their use is configured as a coping strategy, highlighting the displacement of emotional mediation from human interactions to digital environments. The objective is to understand the impacts of this pattern on mental health, social relations, and educational processes, paying attention to the weakening of human mediation and the vulnerability of children and adolescents. Methodologically, this is an analytical bibliographic research, based on a critical review of the literature and the analysis of normative frameworks, with emphasis on the Digital Statute of Children and Adolescents (Law No. 15.211/2025). The results indicate harm to cognitive, emotional, and social development, as well as impairment of family interactions. It is concluded that digital addiction is a multifactorial phenomenon that requires the integration of psychological, sociocultural, and normative dimensions, with qualified mediation being

¹ Master's degree in Emerging Technologies in Education. Must University.
E-mail: werlendossantosalves@gmail.com

² Master's student in Emerging Technologies in Education. Must University. E-mail: mayer007@gmail.com

³ Master's student in Emerging Technologies in Education. Must University.
E-mail: artesentrelacos@gmail.com

⁴ Master's student in Emerging Technologies in Education. Must University.
E-mail: tatianadecastronogueira@gmail.com

⁵ Master's student in Emerging Technologies in Education. Must University.
E-mail: carlamamenti@hotmail.com

⁶ Master's student in Emerging Technologies in Education. Must University. E-mail: marciatosta@gmail.com

⁷ Master's student in Emerging Technologies in Education. Must University.
E-mail: sinaralinhaires@hotmail.com

⁸ Master's student in Emerging Technologies in Education. Must University.
E-mail: larissa.mansk.ferreira@gmail.com

central to a balanced relationship with digital technologies. The development of educational practices that promote the critical and conscious use of digital technologies is recommended.

Keywords: Digital Addiction. Emotional Regulation. Smartphones. Educational Mediation. Hyperconnectivity.

RESUMO

Este artigo analisa a dependência digital na cultura contemporânea a partir de sua articulação com processos de regulação emocional, com ênfase na terceirização dessas funções para smartphones. Parte-se do pressuposto de que, na era da hiperconectividade, esses dispositivos têm sido incorporados como mediadores da experiência emocional, desempenhando funções regulatórias diante de estados afetivos negativos. Nesse contexto, seu uso configura-se como estratégia de enfrentamento, evidenciando o deslocamento da mediação emocional das interações humanas para ambientes digitais. O objetivo é compreender os impactos desse padrão na saúde mental, nas relações sociais e nos processos educativos, com atenção à fragilização da mediação humana e à vulnerabilidade de crianças e adolescentes. Metodologicamente, trata-se de pesquisa bibliográfica analítica, baseada na revisão crítica da literatura e na análise de marcos normativos, com destaque para o Estatuto Digital da Criança e do Adolescente (Lei nº 15.211/2025). Os resultados indicam prejuízos ao desenvolvimento cognitivo, emocional e social, além do comprometimento das interações familiares. Conclui-se que a dependência digital é fenômeno multifatorial que exige integração de dimensões psicológicas, socioculturais e normativas, sendo a mediação qualificada central para uma relação equilibrada com as tecnologias digitais. Recomenda-se o desenvolvimento de práticas educativas que promovam uso crítico e consciente das tecnologias digitais.

Palavras-chave: Dependência Digital. Regulação Emocional. Smartphones. Mediação Educativa. Hiperconectividade.

RESUMEN

Este artículo analiza la dependencia digital en la cultura contemporánea desde la perspectiva de su articulación con los procesos de regulación emocional, con énfasis en la externalización de estas funciones a los teléfonos inteligentes. Parte de la premisa de que, en la era de la hiperconectividad, estos dispositivos se han incorporado como mediadores de la experiencia emocional, desempeñando roles reguladores ante estados afectivos negativos. En este contexto, su uso se configura como una estrategia de afrontamiento, lo que resalta el desplazamiento de la mediación emocional de las interacciones humanas a los entornos digitales. El objetivo es comprender los impactos de este patrón en la salud mental, las relaciones sociales y los procesos educativos, prestando atención al debilitamiento de la mediación humana y la vulnerabilidad de niños y adolescentes. Metodológicamente, se trata de una investigación bibliográfica analítica, basada en una revisión crítica de la literatura y el análisis de marcos normativos, con énfasis en el Estatuto Digital de Niños y Adolescentes (Ley n.º 15.211/2025). Los resultados indican daños al desarrollo cognitivo, emocional y social, así como un deterioro de las interacciones familiares. Se concluye que la adicción digital es un fenómeno multifactorial que requiere la integración de dimensiones psicológicas, socioculturales y normativas, siendo la mediación cualificada fundamental para una relación equilibrada con las tecnologías digitales. Se recomienda el desarrollo de prácticas educativas que promuevan el uso crítico y consciente de las tecnologías digitales.



Palabras clave: Adicción Digital. Regulación Emocional. Smartphones. Mediación Educativa. Hiperconectividad.

1 INTRODUCTION

The intensification of the use of smartphones and other digital technologies has promoted significant transformations in the forms of social interaction, daily habits, and emotional regulation processes. In this context, nomophobia stands out, characterized by the fear of being without access to a cell phone, a phenomenon associated with an increase in symptoms of anxiety and depression (ELHAI; DVOŘÁK; HALL, 2020).

In contemporary digital culture, digital technologies, particularly smartphones, are not limited to the expansion of instrumental capacities, but operate as structuring devices that reconfigure modes of perception, cognitive processes, and forms of constitution of subjectivity. By continuously mediating everyday experience, these technological artifacts begin to influence not only access to information, but also the way individuals interpret the world, organize attention, and construct meanings about themselves and others, evidencing their centrality in the reorganization of sociocultural and psychic dynamics in contemporary times (SANTAELLA, 2020).

From this perspective, the growing mobilization of smartphones as emotional regulation devices is observed, especially in the face of negative affective states, such as anxiety, boredom and frustration. This movement indicates that such technologies cease to perform a merely instrumental function and start to act as mediators of coping processes, being incorporated as immediate responses to emotional demands. As a result, there is a progressive shift from traditional regulation mechanisms, historically anchored in human interactions, to strategies mediated by digital devices, reconfiguring the ways of dealing with the affective experience in contemporary times (NICOLACI-DA-COSTA, 2006).

This study, situated in the field of human and social sciences, aims to analyze digital dependence from its articulation with emotional regulation processes, with emphasis on the outsourcing of these functions to smartphones. It seeks to understand the role of these devices, in the context of nomophobia, as coping strategies, as well as their impacts on mental health, social relationships and the weakening of human mediation, especially among children and adolescents. Its relevance stems from the advancement of the effects of technology on mental health, as well as the growing need for regulation in the digital environment, expressed, in Brazil, by Law No. 15,211/2025.

Methodologically, this is a bibliographic research based on a critical review of the literature. The article is structured in three axes: fundamentals of digital dependence, analysis of the use of smartphones as a strategy for emotional regulation and discussion of its psychological and social impacts. It is based on the hypothesis that the incorporation of digital

devices as mediators of emotional experience configures a process of outsourcing emotional regulation, with direct implications in the weakening of human mediation and in the reorganization of social bonds in contemporary times.

2 THEORETICAL FOUNDATION

Digital addiction, also called problematic use of digital technologies, especially smartphones, is configured as a multifactorial phenomenon located at the intersection between socio-technical transformations and subjective processes. It is a persistent pattern of use characterized not only by frequency or intensity, but above all by its psychological function, producing impairments in emotional functioning, social relationships, academic performance and quality of life (BUSCH; MCCARTHY, 2021; MONTAG; WALLA, 2021).

In this sense, digital addiction can be understood as a form of maladaptive emotional regulation, in which smartphones and other digital devices are mobilized as coping strategies in the face of negative affective states.

The scientific literature has consistently shown the association between the intensive use of mobile devices, especially smartphones, and a decrease in subjective well-being, accompanied by an increase in symptoms of anxiety, stress, and dissatisfaction. This body of evidence suggests that such impacts are not restricted to the frequency of use, but are related to the functions that these devices assume in daily life, particularly when mobilized as strategies for emotional regulation and immediate response to affective demands, contributing to the intensification of patterns of dependence and psychological vulnerability (ELHAI; DVOŘÁK; HALL, 2020).

However, this relationship should not be interpreted exclusively in quantitative terms, as a simple excess of time of use, but in the light of the structural, cultural and psychological conditions that sustain the centrality of technologies in contemporary daily life.

Thus, the analytical focus shifts from how much is used to why and how it is used, highlighting the role of smartphones as central mediators of emotional experience. On the sociotechnical level, hyperconnectivity emerges as a structuring element of contemporary social life, characterized by permanent connectivity that redefines the forms of interaction and establishes continuous availability as a social norm (CASTELLS, 2015; VAN DIJCK, 2013).

This phenomenon is integrated into the cultures of connectivity, which operate as normative devices, guiding practices, expectations, and forms of engagement in the digital environment. Constant presence on the networks is no longer a choice and becomes a

sociocultural requirement, producing a scenario in which disconnection can generate anxiety, discomfort and a feeling of exclusion.

Among the factors that support this pattern, the fear of missing out (FOMO), digital multitasking, and the internalization of continuous connection habits stand out. FOMO, in particular, acts as an important psychological mechanism, by producing a persistent sense of incompleteness and urgency, leading individuals to turn to digital devices as a form of immediate emotional regulation (PRZYBYLSKI et al., 2013).

Such practices are not homogeneous, being modulated by sociocultural factors, so that family, educational and institutional contexts can both intensify and mitigate patterns of problematic use.

The understanding of this phenomenon is deepened in the light of the Theory of Self-Determination, which postulates that human behavior is guided by the continuous search for satisfaction of basic psychological needs, such as autonomy, competence and belonging. In this context, such needs constitute essential foundations for healthy development and well-being, so that their frustration tends to trigger compensatory strategies of emotional regulation, often mediated by digital devices, which contributes to the consolidation of problematic use patterns (RYAN; DECI, 2017).

In this context, the use of digital technologies can assume an adaptive character when it contributes to the fulfillment of these needs, or maladaptive when it starts to operate as a compensatory strategy in the face of their frustration. Thus, the use of smartphones as an emotional regulation strategy can be understood as a response to deficits in the conditions for satisfying these needs, configuring itself as a coping mechanism that, although functional in the short term, tends to produce negative effects on psychological development and social relationships over time (RYAN; DECI, 2017).

In this sense, digital dependence should not be reduced to deviant individual behavior, but understood as an expression of a broader socio-technical ecology, in which technologies, social structures, and subjective processes are articulated in the production of new forms of emotional regulation. Such a perspective requires analytical approaches that integrate psychological, cultural, and normative dimensions, especially in the face of the advancement of regulatory frameworks that recognize the impacts of the digital environment on human development.

2.1 CONCEPTS OF DIGITAL DEPENDENCE

Digital dependence is epistemologically consolidated as a persistent and profoundly unregulated behavioral pattern in the consumption of technologies, culminating in acute psychic suffering or systemic functional impairments in the multiple spheres of the subject's life. In contrast to restrictive methodological approaches, this construct transcends the mere fixation on specific platforms, also encompassing engagement in daily practices of neutral appearance, such as the obsessive checking of messages and notifications, whose volume and functionality denounce the automation of habit and the failure of self-regulation mechanisms (BUSCH; MCCARTHY, 2021; MONTAG; WALLA, 2021).

From an analytical perspective, the phenomenon is aligned with the taxonomy of behavioral dependencies, being diagnosed by the presence of clinical markers such as tolerance, withdrawal syndrome, collapse of inhibitory control, and perpetuation of use despite deleterious externalities. In this scenario, the instrumentalization of technology as a *coping strategy stands out*, in which the digital apparatus is phagocytosed as a way to access instant gratification or as a shield against aversive affective states, such as anxiety, boredom and loneliness (RYAN; DECI, 2017; ELHAI; DVOŘÁK; HALL, 2020).

Consequently, interaction with smartphones and application ecosystems is detached from its purely instrumental purpose to assume a central regulatory function, operating as the main prosthesis for mediating emotional states.

In view of this framework, there is a rigorous need to delineate the epistemological boundary between quantitatively frequent and qualitatively problematic use. Intensive immersion, in isolation, does not typify dependence, since the diagnosis requires the unequivocal verification of the loss of agency, the obsessive centrality of the behavior in the subject's routine and the outbreak of latent structural damage (MONTAG; WALLA, 2021).

It is evident, therefore, that the measurement of digital dependence does not tolerate reductionism centered strictly on screen time, demanding an exegesis based on its psychological functionality, notably with regard to the capture of smartphones as vectors of maladaptive emotional regulation.

Empirical incursions dedicated to the phenomenon have mobilized a diversified methodological arsenal, encompassing validated psychometric scales, behavioral screening, and the measurement of mental health markers. The scrutiny of these data reveals a robust convergence indicating that high rates of digital dependence are unmistakably linked to the corrosion of subjective well-being and the proliferation of psychiatric symptoms, with the

consumption of social networks as one of the most striking predictors of this deterioration (ELHAI; DVOŘÁK; HALL, 2020; PRZYBYLSKI et al., 2013).

Such evidence consolidates the premise that the problematic use of sociotechnical arrangements is umbilically intertwined with processes of frankly maladaptive emotional regulation, in which the incessant hunt for ephemeral psychic relief culminates in the severe impairment of psychological homeostasis in the medium and long term.

2.2 HYPERCONNECTIVITY AND CONNECTIVITY CULTURES

Hyperconnectivity is erected as one of the ontological pillars of contemporaneity, transcending the mere technical infrastructure to consolidate itself as a pervasive integration of subjects into digital networks. This phenomenon is characterized by the intensification of mediated sociabilities, configuring a sociocultural condition that reorients the coordinates of time, attention and presence. Under this aegis, permanent connectivity ceases to be a contingency to become a structuring norm, redefining the grammars of social interaction (CASTELLS, 2015; VAN DIJCK, 2013).

In this scenario, uninterrupted availability is stripped of its elective character and begins to operate as an implicit imperative, engendering new regimes of engagement and exogenous modalities of social pressure. The so-called "cultures of connectivity" act, therefore, as normative devices that guide behaviors, expectations, and subjectivities in the digital ecosystem. Such devices institutionalize tacit patterns about the frequency and nature of being connected, naturalizing omnipresence on networks by linking it to symbolic capitals of belonging, visibility, and social validation. Consequently, practices such as digital multitasking and reactive surveillance of notifications are internalized not only as habits, but as prerogatives for the maintenance of intersubjective recognition (VAN DIJCK, 2013; CASTELLS, 2015).

Among the psychosocial constructs that sustain this dynamic, the *fear of missing out* (FOMO) stands out — the persistent and diffuse apprehension that potentially rewarding experiences of others are occurring without the subject's knowledge. This phenomenon precipitates a state of chronic urgency and ontological incompleteness, compelling individuals to a digital hypervigilance in which mobile devices start to act as prostheses of immediate emotional regulation (PRZYBYLSKI et al., 2013).

From this perspective, hyperconnectivity not only circumscribes social practices, but also organizes affective economies, reinforcing the dependence on informational flows for the stabilization of internal states.

Simultaneously, the sociocultural ecosystem exerts a determining influence on the vectors of use of technologies, outlining factors of vulnerability and resilience. Cohesive family environments, face-to-face interactions endowed with symbolic density, and robust emotional support systems operate as protective instances, enabling a relationship of agency and balance with the digital. On the other hand, scenarios marked by bonding weaknesses, lack of symbolic mediation, and unprocessed affective demands tend to catalyze the use of technologies as compensatory mechanisms for coping with and regulating affects (LEMOS, 2021; RYAN; DECI, 2017).

Teleological analysis of the use of digital technologies demonstrates that the underlying motivations determine the impact of digital on subjective well-being. While the use of expressiveness and dialogic communication tends to foster positive experiences, the use driven by normative pressures, the need for external validation, or emotional avoidance schemes has a high deleterious potential. This differentiation underlines that pathogenicity does not reside in technology *per se*, but in the psychic function it assumes in the subject's economy, reiterating the urgency of investigating the qualitative dimension of digital use, especially in its interface as a strategy of emotional regulation.

2.3 PSYCHOLOGY OF TECHNOLOGICAL DEPENDENCE

The psychology of technological dependence offers a robust theoretical framework for understanding the mechanisms underlying the problematic use of digital technologies, allowing us to analyze it not only as excessive behavior, but as a process of emotional regulation mediated by technological systems. Among the explanatory models, the reinforcement theory stands out, according to which behaviors followed by rewards tend to be reiterated (AINSLIE, 2001; ALTER, 2017).

In the digital environment, this dynamic is intensified by systems structured based on intermittent reinforcements, such as notifications, likes, and messages, which enhance the maintenance of continuous engagement and make it difficult to interrupt use. In addition, cognitive approaches, such as the time preference theory, contribute to explain the human tendency to privilege immediate rewards over long-term benefits (AINSLIE, 2001).

Such predisposition favors the consolidation of patterns of compulsive use, since digital devices offer quick and accessible responses to the regulation of affective states, even when associated with progressive impairments in psychological functioning. From a neuropsychological point of view, the intensive use of smartphones and digital platforms is associated with the activation of brain reward systems, particularly the release of dopamine, a

central neurotransmitter in the processes of motivation, learning, and habit formation (MONTAG; WALLA, 2021).

Continuous exposure to highly responsive digital stimuli can lead to desensitization processes, requiring increasing levels of stimulation to obtain similar effects, which contributes to the escalation of use and the loss of behavioral control. At the same time, the absence of these stimuli can trigger stress responses, associated with the release of cortisol, configuring a cycle that articulates the search for pleasure with the avoidance of psychic discomfort. In this configuration, digital devices begin to operate as strategies for immediate emotional regulation, albeit of a transitory and potentially maladaptive nature, being mobilized in the face of states such as anxiety, boredom and loneliness (RYAN; DECI, 2017).

The consequences of this process are widely documented in the literature, including reduced attention span, impaired self-control, mood swings, sleep disturbances, and increased feelings of social isolation. Such evidence indicates that digital addiction should not be understood as an isolated phenomenon, but as an expression of a complex socio-technical ecology, in which technologies, cultural structures, and subjective processes are articulated in the production of new forms of emotional regulation (SANTAELLA, 2020).

In view of this socio-technical configuration, the enactment of Law No. 15,211/2025, which establishes the Digital Statute of Children and Adolescents, represents a relevant milestone in recognizing that the architecture of digital environments and their engagement mechanisms are not neutral and can directly interfere in the processes of cognitive, emotional, and social development (BRASIL, 2025).

By establishing full protection in the digital environment and co-responsibility between family, school, State, and technological platforms, the legislation shows that the processes of emotional regulation mediated by digital devices cannot be understood only as individual choices, but must be analyzed in the light of their structural conditions and their impacts on human development.

3 FAMILY MEDIATION AND DIGITAL REGULATION: IMPLICATIONS FOR DEVELOPMENT AND THE FORMATION OF VALUES

The delegation, by families, of emotional and behavioral mediation functions to smartphones and other digital devices is one of the most emblematic phenomena of the contemporary reconfiguration of educational practices in the sphere of private life. In this context, the consolidation of technological devices as substitute mediators of emotional regulation is observed, evidencing a significant shift in the forms of care and socialization. What

was traditionally carried out through presence, listening, dialogue and symbolic mediation is, in many cases, transferred to smartphones and other technologies that operate as immediate emotional support, reducing the centrality of human mediation in the formative processes (BAUMAN, 2001; ALVES, 2025a).

This configuration can be understood in the light of the transformations in the forms of interaction mediated by technology, in which permanent connectivity tends to reconfigure social bonds, making them more fluid, immediate, and sometimes less profound (BAUMAN, 2001). In a complementary way, Alves (2025a) highlights that the intensive use of digital devices in the educational and family context can compromise emotional and social development processes, especially when these devices assume regulatory functions that should be exercised in the context of human relationships.

Such a process reveals a transformation in family dynamics, in which the device ceases to be just a tool and starts to operate as an affective mediator, reorganizing both the childhood experience and the family's own educational function. This transformation can also be understood from Han's (2017) critique, which indicates that contemporary society, marked by the logic of performance and hyperstimulation, tends to weaken experiences of interiority, reflection, and bonding, favoring immediate and superficial responses to emotional states.

In this scenario, the use of smartphones as a strategy for emotional regulation can be interpreted as a response to the acceleration of daily life and the growing difficulty of sustaining relationships based on presence and listening. In the educational field, Alves (2025a) recognizes that digital technologies have significant potential for learning, expanding access, personalization, and flexibility. However, the author emphasizes that unmediated and unregulated use can compromise essential training processes, defending the need for guidance, supervision and balance between technological use and face-to-face interactions.

This perspective is close to the analyses of Turkle (2011), for whom digital technologies, although expanding the possibilities of connection, can produce forms of emotional distancing, replacing deep interactions with mediated bonds. Under this logic, the replacement of the caregiver's presence by digital devices can compromise the constitution of secure bonds and the capacity for symbolic elaboration. This displacement is part of the broader context of the culture of connectivity, characterized by continuous digital presence and the standardization of permanent availability (VAN DIJCK, 2013; CASTELLS, 2015).

In this logic, family mediation tends to be reconfigured according to principles of immediacy, efficiency and quick response, shifting the axis of the relationship to technological functionality.

The consequences of this process are particularly relevant in the field of moral and socio-emotional formation, since the family constitutes the privileged space for the transmission of values, norms and ethical references. When fundamental experiences such as coping with boredom, waiting, and frustration are systematically mediated by screens, the possibility of developing skills such as emotional self-regulation, empathy, and tolerance for the immediate is reduced.

Alves et al. (2025b) reinforce this concern by analyzing nomophobia from a pedagogical perspective, evidencing its impacts on students' attention, behavior, and social interaction. The authors defend the construction of educational practices that promote the conscious and responsible use of technology, highlighting the importance of joint action between family and school.

This position finds resonance in contemporary analyses that problematize the effects of digital hyperstimulation on cognitive and emotional processes, indicating that continuous exposure to intense flows of information tends to reduce attention span, hinder reflection, and compromise the construction of deeper experiences (TWENGE, 2017; CARR, 2011).

Recent evidence indicates that digital environments structured by quick rewards and constant stimuli favor patterns of immediate and superficial engagement, to the detriment of reflective processes and emotional self-regulation, contributing to increased impulsivity, mental fatigue, and fragmentation of subjective experience (TWENGE, 2017; CARR, 2011).

From the point of view of human development, the replacement of dense interactions by continuous digital stimuli compromises the construction of psychic autonomy and impoverishes the relational experience. The child learns to deal with emotions, limits and conflicts through interaction with significant adults; When this mediation is replaced by technology, there is a change in the very structure of subjective experience. Alves (2025c), when discussing Education 5.0 from the perspective of neuroscience, emphasizes that the use of smartphones and digital platforms must be subordinated to the integral development of the subject, integrating cognitive, emotional, and social dimensions, and not only to instrumental efficiency.

The relevance of this problem is reinforced in the legal field by the enactment of Law No. 15,211/2025, which establishes the Digital Statute of the Child and Adolescent. By establishing the protection of children in the digital environment as a normative principle, the legislation recognizes that early and unassisted exposure to technologies is not neutral, but directly interferes with biopsychosocial development. In this sense, the mediation of technological use is no longer just a private practice and becomes part of a field of co-responsibility between family, school, State and digital platforms.

Thus, the use of smartphones as a strategy for emotional regulation can be understood as a symptom of a structural tension of contemporaneity, marked by the acceleration of time, the centrality of technologies and the reconfiguration of family relationships.

The challenge that is imposed does not consist in the rejection of technology, but in the construction of a conscious, ethically and pedagogically oriented mediation. As Alves (2025a; 2025b; 2025c) argues, the use of smartphones and digital technologies must be linked to educational processes that promote autonomy, criticality, and integral development, preserving the irreplaceable role of human interactions in the formation of family and social values.

4 CONSEQUENCES OF DIGITAL ADDICTION

Digital addiction is configured, in contemporary times, as a highly complex phenomenon, whose repercussions go beyond the individual scope and are projected on social, educational and organizational dimensions, assuming contours of an emerging public health problem and a central challenge for education. More than a simple excess of use of technological devices, it is an unregulated relationship with digital ecosystems and platforms marked by compulsiveness, difficulty in self-control, and significant damage to mental health, quality of life, and human performance (ELHAI; DVOŘÁK; HALL, 2020; MONTAG; WALLA, 2021).

In this analytical framework, the logic of hyperconnectivity, articulated with contemporary digital culture, marked by the immediacy of responses and continuous hyperstimulation, operates as a vector for the reorganization of daily practices and modes of experience. Such a configuration tends to compromise fundamental cognitive processes, such as sustained attention and time management, while hindering the construction of denser, more reflective, and symbolically elaborated experiences, evidencing the effects of technological mediation on the quality of psychic life and social interactions (SANTAELLA, 2020; HAN, 2017).

The effects of digital addiction manifest themselves significantly at the individual level, especially through the increase in symptoms of anxiety, depression, and stress, associated with continuous exposure to digital stimuli and the recurrent search for validation and immediate rewards. This dynamic reveals that digital environments, structured by logics of engagement and social recognition, operate as reinforcement systems that intensify sensitivity to external feedback, contributing to emotional instability and dependence on quick gratification mechanisms, with direct impacts on psychological well-being (TWENGE, 2017; PRZYBYLSKI et al., 2013).

From a cognitive point of view, a set of alterations is observed associated with reduced sustained attention, impaired self-control, and difficulty engaging in activities that require

prolonged effort and continuous concentration. Such effects indicate that recurrent exposure to fragmented digital stimuli tends to reconfigure the modes of information processing, favoring more dispersed and immediate attentional patterns, with direct impacts on academic and professional performance and on the ability to perform complex and reflective tasks (CARR, 2011).

In addition, the use of digital devices as a resource for immediate psychic relief, understood as the use of *coping*, tends to reinforce cycles of dependence by consolidating patterns of emotional regulation based on the avoidance of negative affective states, such as boredom, frustration and loneliness. In this process, technology starts to be mobilized as a recurrent strategy of emotional compensation, which, although it produces momentary relief, compromises the development of psychic autonomy and self-regulation, favoring the maintenance of maladaptive coping patterns and the intensification of psychological vulnerability (RYAN; DECI, 2017; ALVES, 2025a).

However, the consequences of digital addiction are not restricted to the individual, extending significantly to social and family relationships. The constant mediation of interactions by digital devices produces a paradox characteristic of contemporary society: the expansion of the possibilities of connection accompanied by the impoverishment of the quality of bonds (TURKLE, 2011).

As a consequence, there is a decrease in empathy, a weakening of social skills, and the fragmentation of face-to-face interactions. In the family environment, mobile devices begin to compete and, in many cases, monopolize the attention of individuals, reducing the spaces for dialogue, coexistence and shared construction of values, which directly impacts the ethical and emotional formation of children and adolescents (NICOLACI-DA-COSTA, 2006; ALVES, 2025b).

This problem acquires even more critical contours when considering the specific vulnerability of children and adolescents in accessing digital platforms, social networks and electronic games. Due to their developmental condition, this audience has less capacity for self-regulation, greater susceptibility to the influence of content, and greater exposure to intensive engagement dynamics based on intermittent rewards (ALTER, 2017).

Digital environments and games are conceived from design architectures oriented to maximizing engagement and dwell time, operating through reinforcement mechanisms that encourage behavioral repetition and make it difficult to interrupt use. Such systems, often structured based on intermittent rewards and continuous stimuli, tend to intensify patterns of prolonged use, with significant impacts on sleep, school performance and mental health,

evidencing the effects of persuasive design logics on the modulation of users' behavior (MONTAG; WALLA, 2021).

In addition, unassisted access to digital environments exposes children and adolescents to relevant risks, such as inappropriate content, *cyberbullying*, data exploitation, and practices of symbolic violence. The culture of connectivity, as analyzed by Van Dijck (2013), establishes implicit norms of continuous participation, reinforcing the need to always be connected and intensifying phenomena such as *fear of missing out* (FOMO), which contributes to dependence and social anxiety (PRZYBYLSKI et al., 2013).

Under this logic, early and intensive exposure to digital technologies can be profoundly harmful, since it interferes with fundamental development processes, such as the construction of identity, the formation of values, and the development of socio-emotional skills.

At the organizational level, digital dependence also has significant implications, by introducing dynamics of continuous interruption, reducing productivity and compromising the quality of professional relationships. Permanent connectivity, associated with the overlap between personal and professional life, contributes to increased mental fatigue, anxiety, and burnout (HAN, 2017).

Paradoxically, digital technologies, associated with increased flexibility and efficiency, can, when used in an unregulated way, produce inverse effects, compromising cognitive performance and psychological well-being. Such impacts result less from their instrumental potentialities and more from the way they are incorporated into daily practices, especially when mobilized as strategies for emotional regulation. In this context, the problematic use of smartphones is associated with fragmentation of attention, cognitive overload, and difficulty in self-regulation, contributing to reduced productivity and increased stress symptoms (BUSCH; MCCARTHY, 2021).

In view of this scenario, the enactment of Law No. 15,211/2025, which establishes the Digital Statute of Children and Adolescents (ECA Digital), is a relevant regulatory framework by recognizing, at the legal level, the centrality of the digital environment in the constitution of contemporary childhood and adolescence experiences. By incorporating socio-technical dynamics as a legitimate sphere of normative incidence, the legislation not only broadens the scope of the principle of full protection, but also signals an inflection in the way in which the Law comes to understand the risks, vulnerabilities and forms of mediation implied in digital interactions.

In this sense, the Digital ECA shifts the protection of children from a strictly territorial perspective to an approach that contemplates the complexity of digital ecosystems, reaffirming

the need for regulation, supervision and co-responsibility between the State, platforms and families in guaranteeing rights in the context of hyperconnectivity (BRASIL, 2025).

By establishing the principle of the best interest of children and adolescents in the use of technologies, the legislation recognizes that digital exposure is not neutral, but involves risks that require qualified regulation. In this sense, the ECA Digital reinforces the need for active mediation, continuous supervision and co-responsibility between family, school, State and digital platforms, showing that full protection, in contemporary times, depends on the articulation between legal normativity and educational practices in the context of hyperconnectivity (BRASIL, 2025).

This perspective converges with the analyses of Alves (2025c), who advocate an educational approach aligned with Education 5.0, in which the use of technologies should be subordinated to the integral development of the subject, integrating cognitive, emotional and social dimensions.

From an analytical point of view, it is essential to understand that digital dependence does not result from the technology itself, but from the absence of qualified mediation and educational practices that guide its use.

The contemporary challenge is, therefore, to build a balanced relationship with digital environments, which recognizes their potential without neglecting their risks. This implies promoting the conscious, critical, and ethically oriented use of technologies, especially among children and adolescents, ensuring that digital innovation is at the service of human development, the preservation of social bonds, and the formation of autonomous, reflective, and emotionally healthy subjects.

5 ECA AND DIGITAL ECA: REGULATION, POWER AND MEDIATION IN THE DIGITAL ENVIRONMENT

Law No. 15,211/2025, which institutes the ECA Digital, is an offshoot of the Statute of the Child and Adolescent (Law No. 8,069/1990), by incorporating the digital environment as a space for the incidence of the principle of full protection. By recognizing that digital experiences participate in the subjective and social constitution, the legislation expands the reach of the ECA, shifting protection to a context marked by algorithmic dynamics and the centrality of platforms in the mediation of relationships. Such a movement is pointed out by recent studies as a necessary regulatory advance in the face of the insufficiency of traditional frameworks to deal with the contemporary risks of the digital environment (COMISSÃO GESTÃO DA INTERNET NO BRASIL, 2024).

In the field of social networks, ECA Digital assigns direct responsibilities to the platforms, establishing measures such as linking minors' accounts to those responsible, prohibiting behavioral profiling, and requiring control and verification mechanisms. These obligations reflect a structural change in digital governance, shifting user accountability to the technological systems themselves, which are now conceived as regulable agents. Such a perspective is consistent with the understanding that digital platforms operate as structures for capturing, analyzing, and modulating behaviors, exercising forms of power based on the extraction and processing of data and the organization of social interactions in the context of surveillance capitalism (ZUBOFF, 2019).

The sanctioning regime instituted, by providing for the application of significant fines, the suspension and even the prohibition of activities, reinforces this displacement by directly affecting the economic logic that sustains the operation of digital platforms. By affecting their monetization and operating models, the legislation introduces structural accountability mechanisms that strain the logic of maximizing engagement and data capture.

In this context, recent analyses indicate that Law No. 15,211/2025 inaugurates a new regulatory level by requiring the review of internal processes, business models, and governance strategies of technology companies, evidencing an inflection in the relationship between state regulation and the digital economy (BRASIL, 2025; ANPD, 2025).

In this context, the limitation of profiling and targeted advertising can be understood, in the light of Han (2017), as an attempt to contain the logic of the attention economy, based on the exploitation of emotional vulnerabilities and the intensification of continuous engagement.

On the other hand, although it does not provide for direct sanctions to parents or guardians, the legislation reaffirms the role of the family as a central instance of mediation. This normative choice shows that protection cannot be reduced to technical or legal mechanisms, but depends on the articulation with educational and relational practices. Recent studies highlight that the effectiveness of the Digital ECA is directly linked to the joint action of platforms, the State, and families, consolidating a model of shared responsibility (Brasil, 2025; National Data Protection Authority [ANPD], 2025).

In light of these considerations, the ECA Digital can be understood as a regulatory framework that responds to the limitations of the self-regulation of platforms, recognized as insufficient in view of the risks associated with the digital exposure of children and adolescents (BRASIL, 2025; ANPD, 2025). By imposing structural obligations and expanding institutional accountability, the law tensions the prevailing logic of hyperconnectivity, while highlighting the

limits of regulation in the face of a digital ecology guided by the capture of attention and the externalization of emotional regulation processes.

Thus, the articulation between the ECA and the ECA Digital consolidates an expanded model of full protection, in which the digital environment is recognized as a territory of rights. However, the effectiveness of this model depends not only on normative imposition, but on the ability to reconfigure the social and educational practices that sustain the use of smartphones and digital technologies, especially in the face of the growing outsourcing of emotional regulation to digital devices.

6 CONCLUSION

The analysis shows that digital addiction should be understood as an expression of structural transformations in the ways of living, learning and relating in contemporary times, marked by the growing outsourcing of emotional regulation to technological devices. In this context, the results of the study corroborate the literature by demonstrating that the use of smartphones as a strategy to cope with negative affective states significantly impacts mental health, social relationships, and educational processes.

The findings dialogue directly with Elhai, Dvořák, and Hall (2020), by confirming the association between problematic smartphone use and increased symptoms of anxiety and depression, especially when these devices are mobilized as emotional regulation resources. In a convergent way, Ryan and Deci (2017) contribute to the understanding of this phenomenon by indicating that such practices can emerge as compensatory responses to the frustration of basic psychological needs, such as belonging and autonomy.

In addition, the results reinforce the analyses of Turkle (2011) and Bauman (2001), by showing that the growing mediation of interactions by digital devices is associated with the impoverishment of social bonds and the weakening of human relationships. In this sense, it is observed that the replacement of face-to-face emotional mediation by digital strategies compromises fundamental developmental processes, especially among children and adolescents, whose vulnerability is amplified in contexts of unmediated access to technologies (BAUMAN, 2001).

From a sociotechnical perspective, the contributions of Castells (2015) and Van Dijck (2013) allow us to understand that such dynamics are not restricted to individual choices, but are inserted in a culture of connectivity that normalizes the constant presence in the digital environment. This condition is enhanced by mechanisms such as the *fear of missing out*, which

intensify the dependence on devices as a form of immediate emotional regulation (PRZYBYLSKI et al., 2013).

Additionally, the cognitive and behavioral effects observed are supported by the analyses of Carr (2011) and Twenge (2017), which point to the reduction of attention capacity, increased impulsivity, and impairment of psychological well-being resulting from continuous exposure to digital stimuli. Such evidence reinforces the understanding that digital dependence is not reduced to the time of use, but to the function that technology assumes in the subject's life.

In view of these findings, digital addiction should be understood as an expression of socio-technical dynamics that reconfigure the processes of emotional regulation, as defended by Alves (2025a; 2025b; 2025c), based on conscious, critical, and ethically oriented mediation of the use of technologies. More than restricting access, it is about qualifying the relationship with the digital environment, reaffirming the central role of human interactions in emotional regulation and integral development. This perspective is also supported by the normative framework established by Law No. 15,211/2025, which recognizes the need for protection and mediation in the use of technologies by children and adolescents.

In this context, it is necessary to adopt educational approaches that prioritize qualified mediation and the development of self-regulation skills and critical use of technologies. Thus, the promotion of a balanced relationship with digital environments depends less on restrictive strategies and more on the construction of formative practices that articulate cognitive, emotional and social dimensions in the conscious and functional use of digital technologies. The outsourcing of these functions to digital devices implies relevant shifts in the management of affective states, with impacts on psychological autonomy and socio-emotional skills.

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