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## THE TRANSFORMATION OF INTERPERSONAL RELATIONSHIPS IN THE DIGITAL AGE:

### CHALLENGES FOR ADOLESCENTS' EMOTIONAL DEVELOPMENT

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#### **Introduction**

Adolescence represents a critical developmental stage during which individuals shape their identity, develop emotional regulation skills, and establish more stable interpersonal relationships. Traditionally, face-to-face interactions with peers have played a fundamental role in fostering empathy, emotional maturity, and social competence. However, the digital era has profoundly transformed adolescents' modes of communication and socialization, shifting a substantial portion of interpersonal interactions into virtual environments through social media and online platforms.

This shift is also reflected in empirical data. Today's youth (Generation Z) reportedly spend an average of more than 2.5 hours per day on social media (World Metrics, 2024); 71% of adolescents use more than one social media platform (Pew Research Center, 2015), and approximately one quarter report being "almost constantly online" (Pew Research Center, 2024). Furthermore, 95% of adolescents are continuously connected to the internet, rendering digital communication not merely a supplementary tool but a primary form of daily interaction (Pew Research Center, 2022).

This digital transformation presents both opportunities and challenges for emotional development. On the one hand, social media can provide a sense of belonging, emotional support, and social connection, particularly for adolescents who experience isolation (National Academies of Sciences, Engineering, and Medicine, 2023; Nesi et al., 2018; Luijten et al., 2022). On the other hand, contemporary research warns that excessive reliance on virtual communication is associated with more superficial interactions, emotional misunderstandings, and increased levels of anxiety, depression, loneliness, and social comparison (Agarwal et al., 2024; Liu et al., 2025; Majeed et al., 2024). Phenomena such as cyberbullying and Fear of Missing Out (FOMO) have been identified as significant risk factors for emotional distress and social anxiety among adolescents (Shaari & Ahmad, 2024).

Within this context, the present article aims to critically examine the scientific literature on the impact of digital communication and social media on adolescents' emotional development, with a particular focus on empathy, emotional regulation, identity formation, and interpersonal relationships. Finally, based on existing evidence, practical recommendations will be proposed for parents, educators, and mental health professionals, with the goal of promoting healthier technology use and supporting adolescents' emotional and social development in the digital age.

## **Literature Review- The Shift of Interpersonal Relationships Toward the Digital Space**

The technological transformation of recent decades has brought about a paradigm shift in the ways adolescents connect with one another. Rather than engaging primarily in face-to-face conversations, many young people today communicate mainly through messaging, social media, and online applications. While this shift toward digital communication offers convenience and immediate access to peers, it simultaneously alters the dynamics of interpersonal relationships.

The transition from face-to-face to virtual communication has introduced new social dynamics and poses challenges to the quality of interpersonal connections. Online communication lacks nonverbal cues such as tone of voice, facial expressions, eye contact, and body language, all of which are essential for fully understanding emotions and communicative intent (Alshenqeeti, 2016; Paradisi et al., 2021). The absence of these cues may lead to emotional misinterpretations in text-based conversations or social media posts, increasing the risk of conflict and feelings of isolation (Riordan & Trichtinger, 2017; Sherblom, 2010). For instance, a joke or a critical remark expressed through text may be perceived as harsher or more personal than intended, thereby creating misunderstandings among adolescents. These challenges underscore the importance of awareness regarding the limitations of virtual communication and the need to develop skills for effectively expressing and interpreting emotions in online environment.

Moreover, digital communication reshapes the social context by significantly altering how adolescents build and maintain social relationships. On social media platforms, interactions are often limited to brief and superficial forms such as “likes” or short comments, reducing the depth and quality of interpersonal connections (Uhls & Greenfield, 2012). Although social media may increase the number of contacts, it does not necessarily foster deep or supportive relationships. On the contrary, studies indicate that time spent online often replaces time spent with friends or family in real-life settings (Armstrong-Carter & Telzer, 2021). As a result, many adolescents may have fewer opportunities to practice the social skills required for face-to-face interactions, which can lead to difficulties in managing real-world social situations. For example, the preference for sending messages instead of engaging in direct conversations, combined with limited exposure to nonverbal social cues such as tone of voice or facial expressions, may reinforce insecurity and contribute to the development of social anxiety (Uhls & Greenfield, 2012).

Nevertheless, it is important to emphasize that the impact of internet use on social relationships is not uniformly negative. The existing literature highlights two main hypotheses in this regard: the stimulation hypothesis and the displacement hypothesis. According to the stimulation hypothesis, internet use can enrich existing relationships and facilitate the formation of meaningful new connections, particularly for adolescents who are physically or emotionally isolated, by enabling them to access supportive online communities (Valkenburg & Peter, 2007). Conversely, the displacement hypothesis suggests that excessive online time may replace real-life social interactions, reduce social skills, and exacerbate feelings of loneliness—especially when the internet is used as an avoidance strategy for challenging social situations (Kraut et al., 1998; Nowland, Necka, & Cacioppo, 2018).

Empirical findings indicate that both perspectives are valid and that the key determining factor lies in how adolescents use the internet. Using digital platforms to maintain or strengthen existing relationships tends to yield positive outcomes, whereas using them as a substitute for offline social interactions is associated with negative effects on well-being and sense of belonging (Shaw & Gant, 2002; Orben, 2020).

### **Empathy and Social Skills in the Age of Social Media**

Empathy—the ability to understand and share the feelings of others—constitutes a core component of emotional and social development during adolescence. Through frequent social interactions, ado-

lescents learn to recognize emotional nuances and respond with sensitivity. In this context, a central question in contemporary research concerns how the shift of communication toward digital platforms affects the development of empathy in young people.

Several theoretical perspectives and empirical findings suggest that intensive social media use may constrain the development of empathy. A meta-analysis by Konrath, O'Brien, and Hsing (2011) documented a significant decline in empathy among American college students between 1979 and 2009, particularly after the year 2000, coinciding with the rapid rise of internet and social media use. One possible explanation lies in the nature of online communication, which reduces nonverbal cues such as facial expressions, gestures, and tone of voice—elements that are crucial for the development of affective empathy (Derks et al., 2008). Moreover, anonymity and physical distance in digital environments may foster deindividuation and less empathic behavior, thereby diminishing sensitivity to others' emotions (Lapidot-Lefler & Barak, 2012; Konrath, 2015). Other studies indicate that excessive time spent online may replace face-to-face interactions, where empathy is practiced through direct emotional responses such as comfort, reassurance, and tangible support (Uhls et al., 2014).

Conversely, more recent literature also presents optimistic perspectives. Social media platforms may serve as spaces where adolescents practice cognitive empathy by being exposed to diverse perspectives, experiences, and emotional expressions. A longitudinal study by Vossen and Valkenburg (2016) found that social media use was associated with increases in both affective and cognitive empathy over a one-year period. Additionally, adolescents may learn to compensate for the absence of nonverbal cues through the use of emojis, memes, and other expressive digital symbols, which can convey emotional meaning and elicit empathic responses. Exposure to emotionally charged content and social issues on social media has also been linked to heightened sensitivity and increased prosocial behavior (Frison & Eggermont, 2016; Coyne et al., 2020).

Overall, the impact of digital communication on empathy development during adolescence is complex and bidirectional. While online interactions may limit certain aspects of affective empathy, they may simultaneously foster new forms of cognitive empathy. This suggests that empathy in the digital age is not disappearing but rather being reconfigured. Consequently, emotional education must adapt to the digital context, supporting adolescents in developing empathic capacities both online and in face-to-face interactions.

### **Adolescents' Emotional Regulation in the Digital Environment**

Emotional regulation refers to the ability to manage and modulate emotions in a healthy and flexible manner in response to stress or challenging social situations. During adolescence, brain regions such as the prefrontal cortex—responsible for self-control and emotional regulation—are still undergoing development, rendering this age group particularly sensitive to external influences, including technology (Casey, Jones, & Hare, 2008). The digital environment, in which adolescents spend several hours each day, may exert both positive and negative effects on their capacity for emotional regulation. On the one hand, online platforms can offer opportunities for self-expression and emotional support; on the other hand, constant exposure to social comparison, stressful content, or online negativity may hinder emotional regulation processes.

A study by Weinstein, Zoon, Yang, and Gratton (2018) demonstrated that continuous social media use is associated with heightened emotional reactivity and greater difficulties in emotion regulation, particularly when use is passive or motivated by avoidance of negative emotions. Similarly, Piccerillo and Digennaro (2024) identified that adolescents with lower emotional intelligence—such as reduced emotional awareness and poorer emotion management skills—tend to exhibit more problematic so-

cial media use. Paradoxically, such problematic use may further impair their ability to cope with emotions.

This study highlighted two key findings: (1) difficulties in emotional regulation are associated with social media addiction, as adolescents who struggle to manage anger, sadness, or anxiety may spend increasing amounts of time scrolling online; and (2) frequent social media use was linked to lower self-esteem among adolescents. These findings suggest that emotionally insecure or distressed adolescents may become trapped in a negative cycle: feeling distressed leads to prolonged online engagement (often in search of validation or distraction), which increases exposure to content that further undermines self-esteem (such as social comparison), resulting in heightened stress or emotional discomfort and, consequently, even greater reliance on social media for emotional relief. Over time, this cycle may foster a form of digital emotional dependency, whereby mood and self-worth become increasingly contingent on online feedback (e.g., likes, comments, or the immediacy of responses from peers).

One area in which the impact of digital communication is particularly evident concerns emotional expression and conflict management. In online environments, adolescents often display impulsive reactions, such as posting angry comments or engaging in heated debates without sufficient reflection, which may lead to conflict and subsequent regret. The anonymity and psychological distance afforded by screens may reduce emotional inhibition, making emotional outbursts more likely, as adolescents do not immediately witness the emotional reactions of others (Kuss & Griffiths, 2017). Research indicates that adolescents with high levels of impulsivity are at greater risk for problematic online behaviors, including harassment and emotional outbursts (Reich et al., 2014).

Overall, the internet and digital platforms have introduced both new opportunities and significant challenges for adolescents' emotional development. Social media use may influence emotional regulation in diverse ways, offering opportunities for connection and shared experiences while simultaneously posing risks to mental health. Although some evidence suggests that social media may support the development of empathy and social skills, excessive use of these platforms has been associated with negative outcomes, including increased anxiety, depression, and self-harming behaviors. This raises a critical question: can social media assist adolescents in regulating their emotions, or does it function primarily as a contributing factor to the emotional challenges they face?

Nevertheless, much remains to be done in this area. Family and educational practices must adapt to a reality in which adolescents' emotional lives are increasingly shaped by digital contexts. This may include, for example, integrating digital mental health literacy into school curricula—such as teaching adolescents how to manage emotions online and how to recognize when social media use is negatively affecting their mood. Additionally, certain indicators (e.g., sleep disturbances, abrupt mood changes following social media use) should be regarded as warning signs that an adolescent may be struggling with emotional regulation in relation to their online activity.

### Identity Formation and Self-Esteem on Social Media

Identity formation constitutes a central developmental task during adolescence, a period in which individuals explore roles, values, and modes of self-expression to build a coherent sense of self (Erikson, 1968). Unlike previous generations, this developmental process no longer occurs exclusively in physical environments but increasingly within virtual spaces. Social media platforms have created a new context for socialization, where adolescents present their self-image and receive immediate feedback, transforming these platforms into a “digital mirror” for identity formation and self-esteem development (Marwick, 2013).

A key feature of social media is the ability to construct a curated identity, whereby users carefully manage the aspects of themselves they display publicly. This selective self-presentation is often driven by a competitive social environment dominated by exposure to idealized images of others, increasing pressure to portray an “idealized” version of the self (Miller, 2017). Consequently, adolescents’ self-esteem may become dependent on external indicators such as likes, followers, and comments, which function as forms of social validation (Valkenburg & Peter, 2011).

Empirical research suggests that this reliance on online approval renders self-esteem more unstable and sensitive to social comparison. Visual platforms such as Instagram and TikTok amplify comparisons with often unrealistic standards of beauty, success, and lifestyle, contributing to feelings of inadequacy and body dissatisfaction, particularly among adolescent girls (Fardouly et al., 2015; Tiggemann & Slater, 2014). These continual comparisons may negatively affect emotional well-being and hinder the development of an authentic identity.

Another important aspect is the potential divergence between online and offline identities. When adolescents feel accepted primarily for their virtual persona, a sense of insecurity or incongruence with their real self may arise, emphasizing the performative dimension of identity development. Nevertheless, social media influence is not uniformly negative. Numerous studies highlight that digital platforms can provide safe spaces for identity exploration, including personal interests, creativity, and gender or sexual identity, particularly for adolescents who experience limited support in offline environments (Valkenburg & Piotrowski, 2017; McInroy & Craig, 2017).

Overall, social media plays a dual role in adolescent identity formation: it can serve as a tool for self-expression and exploration, yet simultaneously generates pressures for conformity and perfection, which may undermine self-esteem and authenticity. These findings underscore the importance of critical and emotional education for adolescents, helping them understand the curated nature of online content and build identities grounded in intrinsic values beyond digital validation.

### **Social Isolation and Loneliness on Social Media**

Although digital technology offers continuous opportunities for connection, a substantial number of adolescents experience loneliness and social isolation. Loneliness is understood as a subjective experience of lacking meaningful connections, which may persist even in the presence of numerous physical or virtual contacts (Cacioppo & Patrick, 2008). Social media often creates the illusion of connection through frequent but superficial interactions, which fail to meet the need for emotional intimacy and belonging (Turkle, 2011).

Empirical studies demonstrate a consistent link between intensive social media use and feelings of subjective isolation. A large-scale study in the United States found that individuals who spent more time on social media platforms reported higher levels of loneliness and social exclusion, irrespective of the number of online connections (Primack et al., 2017). These findings suggest a negative cycle in which loneliness drives social media use, while shallow digital interactions further reinforce feelings of isolation (Huang, 2017).

The literature distinguishes clearly between objective and subjective isolation, emphasizing that increasing digital contacts does not guarantee improved emotional quality of relationships (Hawkey & Cacioppo, 2010). In this context, the phenomenon of FOMO (Fear of Missing Out) constitutes an additional risk factor, as continuous exposure to curated depictions of others’ social lives can intensify feelings of exclusion and loneliness (Przybylski et al., 2013). This paradox has been described as being “connected but alone” or experiencing “disconnected connectivity,” where an individual is technically online but emotionally detached (Turkle, 2011).

However, the impact of social media is not necessarily negative. According to the stimulation hypothesis, when social media is used to reinforce existing offline relationships or to build meaningful interactions, it may contribute to reduced loneliness and enhanced feelings of belonging (Valkenburg & Peter, 2007). Research indicates that relationship quality, rather than quantity, is the primary determinant of perceived loneliness and psychological well-being (Holt-Lunstad et al., 2015).

Intensive and passive social media use is associated with increased subjective isolation among adolescents, whereas active and relational use may confer protective effects. These findings underscore the importance of educational and psychosocial interventions that promote meaningful relationships, emotional reflection, and mindful technology use. This aspect is particularly critical, as chronic loneliness during adolescence has been linked to increased risk for depression, anxiety, and suicidal ideation (Loades et al., 2020).

### **Cyberbullying: Implications for Emotional Well-Being**

Cyberbullying is defined as a form of repeated, intentional, and harmful harassment conducted via electronic communication technologies, including social media, messaging, email, or the dissemination of humiliating content (Patchin & Hinduja, 2015). Compared to traditional bullying, cyberbullying is characterized by unique features that make it particularly harmful: 24/7 accessibility, aggressor anonymity, and a broad audience, which substantially amplifies the victim's experience of shame and humiliation (Kowalski et al., 2014). Furthermore, the intrusion of cyberbullying into spaces perceived as safe, such as the home, increases adolescents' sense of helplessness and insecurity.

Scientific literature demonstrates that experiences of cyberbullying are closely associated with serious mental health consequences in youth, including heightened anxiety, depression, social withdrawal, and suicidal ideation (Bauman, 2010; Modecki et al., 2014). Victims often exhibit low self-esteem, social withdrawal, academic difficulties, and post-traumatic stress symptoms, exacerbated by the persistent digital traces that reactivate traumatic experiences (Ditch the Label, 2021). At the same time, digital aggressors themselves present psychological risks, including increased aggression, reduced empathy, and problematic behavior, often linked to prior experiences of victimization (Ybarra & Mitchell, 2007).

A particularly concerning dimension of cyberbullying is public shaming, where the virtual crowd intensifies attacks through negative comments and reactions. For adolescents, for whom identity and social reputation are crucial, this form of public exposure is associated with strong feelings of shame, social anxiety, and disrupted interpersonal relationships.

Given the profound impact of cyberbullying on emotional development, preventive and supportive interventions are essential. Psychoeducation in schools, development of empathy and socio-emotional skills, promotion of online safety, and active involvement of parents and mental health professionals represent key elements in addressing this phenomenon. Cyberbullying should be treated as a complex psychological and social problem requiring an integrated and long-term approach.

### **Fear of Missing Out (FOMO) and Pressure to Stay Connected**

Fear of Missing Out (FOMO) refers to a persistent anxiety arising from the perception that others are experiencing rewarding social events without one's participation (Przybylski et al., 2013). While concern over social exclusion has historically been part of adolescent development, social media has intensified this experience, making it more frequent, visible, and intrusive. Digital platforms provide

continuous exposure to peers' activities, increasing social comparison and feelings of exclusion.

From a developmental perspective, FOMO is closely linked to basic needs for belonging, approval, and social connection. According to self-determination theory, individuals struggling to satisfy needs for autonomy, competence, and relatedness are more prone to develop FOMO (Przybylski et al., 2013). Adolescents, due to heightened sensitivity to peer approval and identity uncertainties, are particularly vulnerable.

Empirical studies indicate that high FOMO levels are associated with problematic social media use, compulsive checking of notifications, and difficulty disconnecting from online environments (Alt & Boniel-Nissim, 2018; Elhai et al., 2020). This creates a negative cycle: the desire to avoid missing out drives continuous digital engagement, which intensifies social comparison, feelings of inadequacy, and emotional dissatisfaction. Adolescents often attempt to compensate through increased online activity, reinforcing psychological dependence on social media.

High FOMO is also linked to reduced psychological well-being. Adolescents with elevated FOMO report lower self-esteem, higher anxiety and depressive symptoms, and reduced enjoyment of present experiences (Przybylski et al., 2013; Majeed et al., 2024). Paradoxically, the fear of missing out can prevent full engagement in real-life activities, creating a split between lived experience and emotional focus. This is often accompanied by "disconnection anxiety," negatively affecting sleep, attention, and academic functioning (Roberts & David, 2020).

Long-term, FOMO poses risks to emotional autonomy and stable identity formation. Adolescents who evaluate themselves primarily through social participation and online visibility risk developing externally oriented identities, reliant on external validation rather than intrinsic values (Odgers & Jensen, 2020). FOMO may also hinder the development of comfort with functional solitude, a key skill for emotional regulation and personal reflection.

Interventions to manage FOMO focus on enhancing self-esteem, fostering emotional awareness, and cultivating a balanced relationship with technology. The concept of JOMO (Joy of Missing Out) promotes acceptance of personal limits and appreciation of present experiences without the pressure to be continuously socially engaged (Wortham, 2020). Family, schools, and mental health professionals play a crucial role in supporting adolescents' emotional autonomy and functional self-regulation strategies.

### **Reduction of Face-to-Face Interactions in the Digital Age**

Digital culture has led to a gradual reduction in face-to-face interactions among adolescents. Traditional social activities—such as in-person conversations, physical games, and informal gatherings—are increasingly replaced by messaging, social media, and other digital communication platforms. This shift raises concerns regarding the development of social, emotional, and empathic skills, as much of adolescents' socialization now occurs through screens rather than direct human contact.

Face-to-face communication is essential for social development, providing continuous exposure to nonverbal cues critical for empathy and social competence. Through physical interactions, adolescents learn to interpret facial expressions, tone of voice, body language, and eye contact—signals that convey emotional information not fully replicable online (Burgoon et al., 2016). Such feedback underpins empathetic understanding and adaptive social behavior.

Research shows that online-mediated interactions reduce exposure to this type of emotional feedback. Even advanced virtual communication, such as video calls, does not fully replicate the level of emo-

tional synchrony and social sensitivity found in physical presence (Kiesler et al., 2014). Text-based communication, in particular, eliminates many of these cues, limiting opportunities to develop essential interpersonal skills.

Sherry Turkle (2011, 2015) highlights that the constant presence of digital devices can diminish conversation quality, even when individuals are physically together. Experimental studies indicate that merely having a smartphone present during a conversation reduces feelings of emotional connection, empathy, and trust (Przybylski & Weinstein, 2013). Adolescents, still developing self-regulation and sustained attention, are particularly susceptible to these effects. Frequent phone use during face-to-face interactions reduces both the quality of immediate communication and long-term social skill development (Reich et al., 2012).

Reduced in-person interaction also impacts verbal communication skills, including active listening, patience, and conversational flow. Unlike digital exchanges, which can be asynchronous and delayed, in-person dialogue requires full presence and real-time responsiveness. Some adolescents report increased social anxiety offline and prefer online interactions, where they feel more in control and less exposed to direct judgment (Uhls et al., 2014). This can create a vicious cycle: reduced face-to-face practice heightens social insecurity, which in turn encourages avoidance of in-person interactions.

Face-to-face interactions are also crucial for building close emotional relationships, including friendships and romantic bonds in adolescence. Emotional intimacy relies on quality time, focused attention, and the sharing of vulnerability—elements reinforced by physical presence, touch, and vocal emotional tone (Baumeister & Leary, 1995). While digital communication can facilitate self-expression, it does not fully substitute for the empathic experience of direct human contact.

Socially, the contemporary reality has been described as a “network of weak ties,” where individuals are numerically connected but less emotionally engaged (Putnam, 2000; Turkle, 2011). For adolescents, who are forming patterns of attachment and interpersonal trust, this may shape expectations for long-term relationships, favoring superficial connections and avoidance of conflict. Phenomena such as ghosting and digital conflict avoidance reduce opportunities to develop critical skills like negotiation, forgiveness, and constructive problem-solving.

The literature emphasizes that the goal is not the elimination of technology, but its balanced integration with face-to-face interactions. Initiatives such as limiting device use in social settings, raising awareness about the importance of full presence, and creating structured spaces for in-person engagement have shown positive potential in restoring the quality of social connections (Odgers & Jensen, 2020).

In conclusion, the reduction of face-to-face interactions represents a key challenge for adolescent social development in the digital era. Families, schools, and mental health professionals are essential in supporting adolescents to develop balanced social skills, maintain empathic communication, and sustain deep interpersonal connections in an increasingly technology-mediated world.

## **Conclusions and Recommendations**

The transformation of interpersonal relationships in the digital age presents a complex landscape with multifaceted impacts on adolescent emotional development. On the positive side, technology offers new opportunities for connection: adolescents can maintain contact with friends across distances, find online support communities for specific interests or challenges, and express themselves creatively on digital platforms. For many adolescents, particularly those who feel marginalized in their offline environments, the internet can serve as a social refuge where they experience acceptance. Moderate

engagement with social media has even been associated with enhanced empathy, social skills, and reinforcement of existing relationships. These findings suggest that technology is not inherently detrimental to emotional development; the effects depend on the manner and extent of its use.

However, the literature also highlights serious challenges that virtual socialization poses to adolescents' emotional and social well-being. Excessive or unregulated social media use has been linked to:

- **Reduced quality of interpersonal relationships:** Screen-mediated interactions are often shallower and emotionally less reliable than face-to-face connections, potentially leaving adolescents feeling empty despite being digitally “connected.”
- **Challenges in empathy development:** The absence of nonverbal cues and the relative anonymity of online communication may hinder full practice of empathy and emotional sensitivity. Some studies suggest potential long-term decreases in empathy among younger generations, though findings remain debated.
- **Emotional dysregulation:** Continuous exposure to social media can create emotional overstimulation through negative news, critical comments, or the constant influx of information, which may sustain chronic low-level anxiety and reduce self-esteem. Adolescents may develop maladaptive coping strategies, turning to devices for comfort rather than processing emotions or seeking support from others.
- **Impact on identity and self-esteem:** Social media exerts pressure to perform and encourages constant comparison to idealized online personas, which can undermine self-worth and create tension between the real self and the curated digital identity.
- **Social isolation and loneliness:** Despite fostering connections, excessive digital engagement paradoxically increases perceived loneliness, as virtual interactions may fail to provide the emotional depth of close personal relationships.
- **Cyberbullying and psychological trauma:** Online spaces can expose adolescents to pervasive bullying, leading to anxiety, depression, and, in extreme cases, suicidal ideation, with potential long-term effects on self-confidence and mental health.
- **FOMO and chronic stress:** Fear of missing out keeps adolescents in a state of constant vigilance, associated with lower subjective well-being and reduced satisfaction from lived experiences.
- **Weakening of traditional social skills:** Reliance on digital communication can slow the development of essential real-world social competencies, such as initiating and sustaining conversations, reading body language, resolving conflicts, and demonstrating empathy in physical presence.

Overall, the evidence indicates that key aspects of emotional and social development—empathy, emotional regulation, identity formation—are being reshaped under the powerful influence of technology. This is not entirely negative: adaptive and positive dimensions exist, but the challenges are real and require proactive strategies. The digital age demands a careful balance: adolescents must learn to leverage technological advantages without compromising emotional growth.

## **Recommendations**

- **For parents and families:**

Create a home environment that balances technology use and personal interaction. Implement rules for device-free times (e.g., during meals or before bedtime).

Monitor online activity tactfully, especially in early adolescence (ages 10–14), without violating privacy. Intervene when exposure to harmful content occurs (e.g., cyberbullying, violent or self-harm material).

Maintain open, nonjudgmental communication about online experiences and model balanced technology use. Encourage offline social and creative activities, such as sports, arts, and outdoor experiences.

- **For schools and educators:**

Integrate digital literacy, emotional intelligence, and online safety into curricula, using interactive discussions and case studies.

Develop social-emotional skills through group work, debates, and role-play activities to compensate for reduced face-to-face practice.

Promote anti-bullying cultures, peer-support groups, and active engagement of parents in awareness campaigns.

- **For mental health professionals:**

Stay informed about the psychological impacts of social media on adolescents and integrate digital life assessments in evaluations.

Include digital “diet” strategies in interventions, alongside traditional coping and cognitive-behavioral techniques.

Offer support groups and collaborate with schools to identify signs of digital stress or cyberbullying. Intervene with cognitive restructuring for victims and empathy training for perpetrators when necessary.

- **For adolescents themselves:**

Cultivate mindfulness and self-awareness: recognize emotional responses to online activity and make conscious choices to reduce exposure to harmful content.

Balance screen time with offline activities, hobbies, and family time to reinforce real-world satisfaction and well-being.

Practice empathy online, support peers, and model positive digital behaviors.

Seek help when feeling overwhelmed by anxiety, depression, or cyberbullying—emotional support is as legitimate as physical care.

- **For communities and policymakers:**

Implement public awareness campaigns on the psychological effects of social media, targeting both parents and adolescents.

Encourage social media companies to provide effective parental controls, content filters, and collaborate with psychologists to reduce addictive features.

Consider stricter age verification for social media accounts and integrate media and information literacy into educational standards.

In summary, the most effective approach is proactive and collaborative. Adolescents, families, schools, mental health professionals, and platforms must work together to create environments where technology enhances rather than undermines emotional and social development. Conscious and moderate use, coupled with education and supportive policies, can equip the next generation with the emotional compass needed to navigate both virtual and real worlds while maintaining well-being, empathy, and human connection.

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**SECTION 3**

