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The social and emotional landscape of Generation Alpha: New forms of relationships in the digital era

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Abstract

Generation Alpha, born from 2011 onwards, represents the first cohort of children fully immersed in digital culture from birth. Their social development unfolds within a hybrid

environment, where offline and online interactions continuously shape patterns of communication, attachment, and emotional expression. This paper explores the transformation of relationships among Generation Alpha, analyzing how technology, media exposure, and changing family structures influence emotional well-being and social behavior. Drawing on recent psychological and educational research, it examines both the benefits of digital connectivity, such as access to information, creativity, and cross-cultural exchange, and the risks, including emotional detachment, loneliness, and social comparison. The paper highlights the dual role of digital technologies as both facilitators and disruptors of interpersonal bonds. Particular attention is given to the role of parents, teachers, and peers in supporting emotional regulation and empathy in digitally active children. The analysis adopts a systemic perspective, integrating insights from developmental psychology, social neuroscience, and education to illustrate how emotional literacy and social competence can be cultivated in an era of constant connectivity. Ultimately, the paper argues that understanding the new social and emotional landscape of Generation Alpha is essential for fostering resilience, empathy, and meaningful relationships in a rapidly changing world.
Keywords: digital childhood, emotional well-being, Generation Alpha, online-offline interactions

1. Introduction

Generation Alpha represents the first cohort to grow up fully immersed in digital culture from the very beginning of their lives [1]. Although many international authors mark 2010 as the starting point of this cohort [2-4], in Poland Generation Alpha is commonly classified as beginning in 2011. Therefore, this paper adopts the Polish classification and refers to children born from 2011 onward. Unlike previous generations, whose early development unfolded primarily in face-to-face contexts, today's children navigate their formative years within an environment where digital and physical experiences constantly intertwine. Screens, interactive media, and online communication form a natural part of their daily routines, shaping how they learn, play, communicate, and build relationships [5]. For many of them, the digital world is not an "addition" to childhood but an inherent dimension of it.

In this rapidly evolving landscape shaped by unprecedented digital connectivity, children's social and emotional development is undergoing significant transformation [6]. The boundaries between offline and online interactions have become increasingly fluid, creating what may be

described as a hybrid developmental space [7]. Within this space, children form attachments, express emotions, seek support, and engage with peers through a combination of in-person and digitally mediated experiences [8]. As a result, traditional models of socialization, rooted in direct interpersonal contact, require reinterpretation to reflect the complex and dynamic nature of contemporary childhood.

At the same time, the environments surrounding children have also changed. Families adopt diverse structures and communication habits, schools integrate digital tools into educational practice, and peer groups extend beyond physical proximity to online communities and platforms. Educational environments also play a central role in shaping children's socio-emotional development, as digital tools increasingly mediate classroom interaction, collaboration, and feedback. These layers form an interconnected system in which children develop their social understanding and emotional competencies. This paper adopts a systemic perspective to explore these processes, drawing on insights from developmental psychology and education. Findings from social neuroscience further highlight that children's emotional regulation and social responsiveness develop within relational contexts that now include both offline and digitally mediated interactions. Such an approach acknowledges that children's behavior and well-being cannot be understood in isolation but must be viewed within the broader network of influences shaping their daily lives.

Understanding how Generation Alpha relates to others, regulates emotions, and constructs a sense of self in a digitally rich world is essential not only for researchers but also for parents, teachers, and practitioners who support children in their development. This paper therefore aims to examine the new social and emotional landscape of Generation Alpha, highlight both opportunities and challenges arising from digital connectivity, and discuss ways in which key adults and institutions can foster emotional literacy, empathy, and resilient interpersonal functioning.

2. Hybrid Environments of Modern Childhood

Modern childhood unfolds within a hybrid ecosystem in which digital and physical experiences blend into a continuous developmental landscape. For many children, screens, online platforms, and networked communication are not separate domains but intertwined parts of everyday life. This fusion of contexts shapes how they learn, play, express emotions, and navigate their social worlds. Increasingly, the distinction between "online" and "offline" feels less meaningful, as

children move fluidly across both spaces while forming relationships, practising skills, and building a sense of identity.

This blended reality is shaped by several forces. Digital technologies offer tools that can support emotional expression, facilitate communication, and nurture children's curiosity. Families, schools, and peer groups all contribute to how children engage with technology - sometimes strengthening healthy habits, sometimes unintentionally reinforcing patterns that make regulation more difficult. The pace of digital environments, the constant flow of information, and the ease of switching between activities create conditions in which children must repeatedly shift attention, interpret cues, and manage emotional stimulation. These experiences form a backdrop for social and emotional development, influencing how children understand themselves and others.

Relationships in the physical world remain essential anchors in this hybrid environment. Parents model digital behaviours, set routines, and create expectations around when, how, and why technology is used—a process often described as digital parenting [9]. In many homes, screens are integrated into daily rhythms, which can help families stay connected but may also blur boundaries between shared time and parallel attention. In schools, teachers mediate social experiences by guiding children through cooperation, conflict, and communication, helping them balance digital tools with interpersonal interaction. Peer relationships, too, now extend into online spaces. Friendships are maintained through messages, shared images, collaborative play, and quick emotional exchanges that feel natural to this generation.

Online environments introduce new possibilities for connection. Digital communication enables children to express emotions quickly through short text, visual symbols, emojis, and memes. These cues often supplement face-to-face expression rather than replace it. However, online spaces carry risks, such as cyberbullying and social comparison, which can influence children's self-esteem and emotional well-being if left unmanaged [10]. Children's understanding of peer dynamics—belonging, acceptance, popularity, conflict—may increasingly be shaped by both in-person interactions and digital signals.

The role of technology in children's relationships is inherently dual. It can act as a facilitator by supporting learning, creativity, and social bonds, but it may also disrupt closeness if it interferes with emotional availability or reduces opportunities for direct interaction. The quality of relationships depends not only on the tools themselves but on how they are woven into everyday life [11]. Parents' own device use can interrupt conversations or reduce

responsiveness, a phenomenon known as technoference [12], which may affect children's emotional security. At the same time, children sometimes rely on screens to soothe distress or distract themselves, creating early patterns of digital self-regulation that function well in the moment but may not support long-term emotional development.

Developmental challenges emerging from this landscape include difficulties with sustained attention, heightened reactivity to sensory input, and reduced opportunities for deep, uninterrupted connection. Some children may experience loneliness or lower well-being when digital environments dominate and offline contact becomes limited [13]. Yet the same technologies can provide meaningful support networks, opportunities for collaboration, and creative spaces where children explore identity and competence. These contrasting possibilities illustrate that technology is neither inherently harmful nor inherently beneficial; its impact depends heavily on context, guidance, and relational dynamics.

Supporting children in hybrid environments requires intentional strategies. Routines that include device-free moments, shared activities, and gradual development of self-regulation can help children navigate stimulation across both spheres. Schools and families play an important role in strengthening digital literacy, encouraging mindful engagement, and creating conditions in which online and offline experiences complement rather than replace one another. Ultimately, healthy development in hybrid environments relies on maintaining strong in-person relationships while integrating technology in ways that enhance, not overshadow, children's social and emotional growth.

3. The Emotional Costs of Digital Childhood

Generation Alpha is growing up in an environment where digital devices are not simply tools but constant companions—often replacing face-to-face interaction during critical moments of development. This shift, described by Fawzi Cheriti [14] as the phenomenon of "phone alone," reflects a growing reality in which smartphones and tablets increasingly take on roles once held by caregivers, siblings, and peers. Although these technologies can enhance learning and provide immediate access to information, they also introduce a range of risks that may compromise children's cognitive, emotional, and social development.

The following sections outline the key emotional and behavioural risks associated with children's digital engagement, drawing on contemporary research from developmental psychology, media studies, and digital health.

Taken together, these risks highlight only a fraction of the social and emotional pressures shaping the lives of Generation Alpha. The digital landscape in which they are growing up is far more complex and dynamic, and its full implications for development are only beginning to be understood.

3.1 Lack of Physical Exercise

A large proportion of children belonging to Generation Alpha have difficulty carrying out even simple gymnastic exercises, have reduced motor skills compared to previous cohorts, and are suffering from rising rates of obesity [15]. These shifts highlight a broader trend: as digital engagement grows, opportunities for spontaneous physical play and movement continue to shrink. What earlier generations took for granted—running, climbing, or engaging in unstructured outdoor play—is no longer a routine part of daily life for many children [16].

Physical inactivity correlates with numerous negative health outcomes. Insufficient levels of physical activity have been associated with an increased risk of obesity, cardiovascular diseases, and mental health disorders [17]. The consequences therefore extend beyond immediate fitness concerns. They shape long-term developmental trajectories.

As movement decreases and screen time rises, children's social participation can subtly shift, influencing both how they engage with peers and how peers respond to them. For example, children with insufficient physical activity and higher levels of sedentary behaviour are also more likely to experience increased rates of bullying [18]—an issue that will be examined later in this article.

3.2 Sleep Disruption

Another significant consequence of prolonged screen time is its detrimental effect on sleep quality. Excessive screen use contributes to chronic sleep deprivation, which intensifies anxiety and cognitive performance issues among adolescents—often leading to daytime sleepiness, reduced concentration, and poorer academic performance [19]. In many cases, this erosion of healthy sleep routines becomes one of the first signs that digital habits are beginning to interfere with children's overall well-being.

Poor sleep quality is also linked to behavioral and mood disorders, including depressive symptoms, indicating that inadequate rest may limit children's capacity to function effectively in social and educational contexts [20]. As disrupted sleep accumulates over time, its emotional

toll deepens, subtly shaping how children manage stress, relate to others, and cope with everyday challenges.

3.3 Emotional Detachment and Loneliness

Emotional detachment refers to a diminished capacity for emotional connection, often exacerbated by excessive screen use. Children who spend substantial time engaged with digital devices may have fewer opportunities for in-person interaction, which can contribute to feelings of social isolation and make it more difficult to develop deeper peer relationships [4]. For some digitally immersed children, this gradual distancing from others can happen quietly, long before adults recognise that something has shifted.

Furthermore, when digital interactions begin to substitute face-to-face contact, relationships may become more superficial, as reduced non-verbal cues limit emotional understanding and depth [21]. Such patterns echo broader concerns about how digital communication can dilute the richness of in-person exchanges, and this emotional disconnection is particularly concerning as it may affect children's ability to navigate social challenges and develop strong interpersonal relationships outside the virtual world.

Sustained reliance on online communication can further intensify these difficulties by limiting opportunities for deeper emotional exchanges and contributing to heightened feelings of loneliness among young people [22]. Over time, this pattern can create a gentle drift toward isolation, quietly shaping how Generation Alpha connects with others in an increasingly digital world.

3.4 Social Comparison and Body Image Disturbance

The relational difficulties intersect with another risk of digital influence: social comparison. It is a key mechanism in identity development, influencing how individuals evaluate themselves relative to others. In digital contexts, where profiles often present filtered or idealised information, these comparisons can distort self-appraisal and contribute to positive—and negative—affect [23, 3]. As online environments amplify upward comparisons and reduce access to realistic or contextualised information, young users may be especially prone to negative self-evaluation and feelings of worthlessness.

In this digital landscape, children measure their self-worth against curated online personas, potentially exacerbating feelings of inadequacy and anxiety, particularly among adolescent girls

engaging with appearance-focused content [24]. Body image concerns extend beyond girls. Increasing exposure to muscular or athletic ideals on social media can also affect boys, who may internalise these standards through fitness influencers [24], however, in boys, similar digital pressures tend to manifest primarily as increased general anxiety rather than appearance-related distress [23]. These gendered patterns remind us that digital comparison does not affect all young people in the same way, but it consistently shapes how they learn to see themselves in relation to others.

3.5 Eating Disorders

The influence of social comparison emerging from digital childhood extends beyond mere aesthetic pressures. Studies indicate a substantial link between problematic device use and the onset of eating disorders, suggesting that high levels of digital interaction can trigger unhealthy eating patterns [25]. Further evidence shows that social media–driven peer pressure and reduced self-esteem can significantly increase adolescents' susceptibility to disordered eating [26]. Pressures often build slowly, subtly altering children's relationship with food before any difficulties become clearly visible to caregivers or teachers.

At a practical level, these influences and pressures can extend into children's eating habits and emotional responses to food. Eating disorders in young people often involve restrictive dieting, episodes of binge eating, and emotional or loss-of-control eating—patterns strongly associated with poor psychological functioning and heightened vulnerability during adolescence [27]. Digital environments may intensify these risks: repeated exposure to idealised bodies on social media can lead young people to adopt unrealistic standards of thinness and develop body dissatisfaction, both of which are recognised pathways linking social media use to disordered eating [28]. Together, these mechanisms suggest that online comparison pressures and pre-existing emotional vulnerabilities can interact to increase susceptibility of children and adolescents to unhealthy eating behaviours.

3.6 Normalization of Harmful Behaviors

Social media serves as a platform where self-harm behaviors are not only normalized but also glamorized through the sharing of images and stories that can trigger such behaviors in vulnerable adolescents. Many teens who engage in self-harm cited exposure to peer-influenced content online as significant in their decision to start self-injuring, showcasing a form of social

contagion intensified by digital interactions [29]. Importantly, digital environments can contribute to the normalization of these behaviors by creating spaces in which self-injury content circulates repeatedly and is shared within peer groups, giving harmful practices a sense of familiarity and even social acceptability [23, 30].

Moreover, the persistent visibility of self-harm content online can exacerbate underlying mental health challenges, contributing to elevated symptoms of anxiety and depression among adolescents [31, 32]. These dynamics illustrate how digital platforms can shape behavioural norms in ways that blur the line between peer support and harmful reinforcement. Particularly for youths already struggling with emotional regulation.

3.7 Exposure to Sexual Content

The impact of sexual content on children and adolescents cannot be overlooked. Repeated exposure to explicit online material can subtly shape how young people think about intimacy, relationships, and their own bodies, often promoting unrealistic expectations and misleading scripts that may influence their emotional and psychological development [33].

Today's digital landscape exposes young people not only to traditional sexual media but also to new rapidly emerging formats. For Generation Alpha—growing up amid adult content platforms that invite personalised attention, private messaging, and direct creator interaction—these risks take on new forms. One emerging risk involves subscription-based, creator-driven platforms that allow users to engage in personalised or interactive exchanges, introducing dynamics very different from traditional passive exposure to sexual material. Another concerns the increasing accessibility of AI-generated sexual content [34], which further complicates the landscape of what young people may encounter online. Given the recent emergence of these developments, their long-term effects on adolescents' psychosocial and emotional growth are not yet fully known.

3.8 Cyberbullying

Bullying manifests in many forms—including physical, verbal, indirect, and as cyberbullying—and is now recognised as a serious public health issue with enduring effects that can extend into adolescence and adulthood [35]. Bullying and cyberbullying are not isolated phenomena; rather, they share many common characteristics and frequently overlap. Online victimisation reaches beyond the physical boundaries of schools and neighbourhoods, enabling aggressors to

continue harassment in digital space, often with a degree of anonymity [36]. This shift into the digital sphere means that harmful interactions can occur at any time, blurring the boundary between school life and home life.

Although prevalence estimates vary widely, with reports suggesting victimisation rates between 13% and 57% [37], its detrimental impact on children's health is well established.The persistent and often inescapable nature of cyberbullying can lead to feelings of hopelessness and isolation, profoundly affecting victims with a long-lasting psychological impact [38, 39]. For many children, this sense of inescapability becomes one of the most distressing aspects, turning digital spaces that should feel safe or social into sources of ongoing threat.

4. Adults Guiding Children's Digital Lives

As the previous section illustrated, the digital environment in which Generation Alpha grows up introduces a range of emotional and behavioural risks. Yet children do not face these challenges alone. Their digital habits, emotional competencies, and social experiences develop within relationships—shaped by the adults and peers who surround them. Parents, teachers, and caregivers all play a critical role in helping children interpret digital experiences, regulate emotions, and establish healthy patterns of connection.

Alongside this, peer groups exert a powerful influence that adults cannot fully control but can help children understand. Taken together, these relationships create the developmental scaffolding through which young people learn to navigate a world in which online and offline experiences continuously intersect.

This section explores how adults can guide children through this hybrid landscape, focusing on emotional regulation, social understanding, and the relational contexts that shape digital development.

4.1 Parents and Family

The family home is often the first place where children learn what digital engagement looks and feels like. Parents model how devices are integrated into daily routines—whether screens become part of shared moments, interrupt conversations, or are used with balance. Children observe adults closely, noticing not only how often devices appear but also the emotions that accompany them. Children's attention to how adults use technology is reinforced by the way

digital devices are already woven into everyday family routines, often blurring the boundaries between play, communication, and practical tasks [40].

Parents also act as emotional regulators, particularly when children encounter online experiences that evoke confusion, frustration, excitement, or distress. Young children often need help making sense of a video that frightened them, a message that hurt their feelings, or a game that simply became too intense. Studies show that parents who remain actively involved—by monitoring online activity, talking openly about digital experiences, and maintaining awareness of emerging risks—tend to have a clearer understanding of how these experiences affect their children [41]. Through this kind of everyday dialogue and emotional presence, parents translate online events into manageable, understandable moments. Over time, these early exchanges form the foundation of what researchers describe as digital co-regulation: a process in which adults support children in recognising their emotions, identifying their needs, and choosing appropriate responses.

Meanwhile, parents face pressures that previous generations did not: constant notifications, remote work environments, and digital expectations that blur the lines between professional and family life. These pressures can lead to unintentional technoference, moments when parental attention is repeatedly disrupted by devices [42]. While normal in small doses, frequent interruptions can weaken the sense of shared presence children rely on for emotional security. The challenge for families is not to eliminate technology, but to integrate it in ways that maintain connection, predictability, and emotional availability.

4.2 Teachers and Schools

Schools now represent a key context in which children learn to navigate digital interactions and develop the skills necessary to do so, with teachers playing a vital role in guiding this process [43]. Classroom learning increasingly incorporates online platforms, collaborative tools, and digital communication. Teachers therefore play a dual role: they are educators of academic content and mediators of the emotional and social experiences that accompany technology.

In many classrooms, digital tools add new layers of complexity. Children must shift attention between tasks, interpret online feedback, and work together across physical and digital spaces. At the same time, teachers often face practical barriers—limited equipment, unreliable connectivity, or gaps in training—which make effective integration difficult [44]. Within these constraints, teachers model respectful interaction and help students practise empathy, turn-

taking, perspective-taking, and navigate digital misunderstandings. Through these everyday practices, teachers strengthen core social-emotional skills that support healthy participation in digital environments.

Schools also serve as early detectors of challenges that may originate online. A child's withdrawal from peers, difficulty concentrating, heightened irritability, or sudden changes in mood may reflect emotional strain related to digital experiences—conflict in group chats, exposure to harmful content, or the stress of social comparison. When teachers and school counselors recognise these signs, they can initiate supportive conversations and direct children toward appropriate resources. In this way, schools act as protective environments that help buffer the emotional pressures of digital childhood.

4.3 Peers and the Limits of Adult Guidance

Although adults hold an important role in shaping digital behaviours, peer relationships increasingly influence how children interpret and respond to online experiences. For Generation Alpha, friendships unfold across multiple platforms: group chats, online games, classroom apps, and social media spaces designed for younger users. These environments can strengthen bonds, offer moments of humour and creativity, and provide spaces for quick emotional exchanges. However, digital settings can make peer experiences more intense, with conflicts, exclusion, or harmful messages spreading rapidly across platforms [45].

Adults cannot physically monitor or control these interactions entirely. Their role is to help children reflect on what happens in their physical—and online—social environments. Conversations about digital conflict, loyalty, popularity, or belonging offer opportunities for children to develop insight into social norms and learn strategies for repairing relationships. In doing so, adults help translate the intensity of online peer dynamics into experiences that can be processed, understood, and integrated into healthy emotional development.

4.4 Co-Regulation and the Shift Toward Self-Regulation

Across homes, schools, and peer groups, emotional development depends on the gradual movement from co-regulation—shared management of emotions—to self-regulation, the child's independent ability to do so [46]. Digital environments often accelerate this need, as children encounter situations that provoke quick emotional reactions: frustration during games, ambiguous messages, or overstimulation from rapid content.

When adults help children recognise their internal states, slow down their reactions, and choose thoughtful responses, they foster the skills required for long-term resilience. Over time, children internalise these strategies, learning to manage digital challenges with greater independence. This transition is not linear, and children may require support even as they grow older, especially when digital contexts become more complex. Yet the foundation of self-regulation is always relational: it is built through repeated moments of shared reflection, grounding, and emotional containment.

4.5 Technology's Dual Impact on Relational Systems

Digital technology influences children not in isolation but through the relational systems they inhabit. In families, screens can either support connection or undermine it, depending on how parents communicate with children about their digital experiences and the guidance they provide [47]. In schools, digital tools can enhance collaboration and learning, yet also complicate classroom dynamics. Among peers, technology can deepen friendships or intensify conflict.

This dual impact underscores that technology is shaped by the relationships that surround it. When adults are emotionally present, set predictable routines, and engage children in conversations about their digital experiences, online and offline environments can complement one another. When guidance is inconsistent or absent, digital experiences may become overwhelming or emotionally taxing.

Ultimately, the task facing parents, teachers, and communities is not to shield children from technology. The task is to help them navigate it with confidence, emotional literacy, and a sense of connection. In this way, adults serve not as controllers of the digital world, but as companions who help children build the capacities needed to thrive within it.

5. Conclusions

In this paper, we examined how hybrid digital–offline environments shape the emotional and social development of children growing up as part of Generation Alpha. Our analysis highlighted that contemporary childhood is embedded in constant connectivity, fluid boundaries between digital and physical settings, and increasingly complex contexts for learning, relating, and regulating emotions. These conditions introduce both opportunities and vulnerabilities, making children's developmental pathways more dynamic but also more fragile.

A key conclusion is that children's emotional lives cannot be meaningfully understood without considering the digital layer that accompanies most of their daily interactions. Technology influences not only the content children are exposed to but also the pace of their experiences, the forms of their relationships, and the ways they communicate needs and seek support. At the same time, online environments do not replace traditional developmental contexts; instead, they blend with them, creating hybrid spaces that require children to continually navigate between multiple modes of interaction.

Another important insight concerns the role of adults. Parents, teachers, and other caregivers play a crucial part in shaping how children internalize, interpret, and emotionally respond to digital experiences. Their ability to guide, model, and co-regulate becomes even more significant in environments where children encounter rapid changes, overstimulation, and emotionally charged content. This guidance helps anchor children's developmental processes in safety, predictability, and relational stability.

Looking ahead, developing children's emotional and social skills must be prioritized across home, school, and community settings. Future efforts should focus on strengthening competencies such as emotional awareness, digital literacy, empathy, and self-regulation—skills that enable children to navigate both online and offline spaces with resilience. Importantly, these skills should not be treated as a response to digital risks alone, but as core developmental foundations that help children thrive in a technologically mediated world.

Overall, we emphasize that digital childhood is neither inherently harmful nor inherently beneficial; rather, it is a complex ecosystem that requires thoughtful support. Approaching children's digital lives with curiosity, understanding, and evidence-informed strategies can help create conditions for healthy emotional development. Supporting children in this hybrid landscape is not simply an added responsibility of modern parenting and education—it is an essential element of preparing the next generation for a future in which the digital and the offline will continue to coexist and evolve.

Generative AI Use Statement

Deepl translator was used to improve the translation into academic English. All changes have been verified and approved by the Authors.

Author Contributions

Conceptualisation, A.B., J.V. and P.A.P.; methodology, A.B., J.V. and P.A.P.; software, A.B., J.V. and P.A.P.; validation, A.B., J.V. and P.A.P.; formal analysis, A.B., J.V. and P.A.P.; investigation, A.B., J.V. and P.A.P.; resources, A.B., J.V. and P.A.P.; data curation, A.B., J.V. and P.A.P.; writing—original draft preparation, A.B., J.V. and P.A.P.; writing—review and editing, A.B., J.V. and P.A.P.; visualization, A.B., J.V. and P.A.P.; supervision, A.B., J.V. and P.A.P.; project administration, A.B., J.V. and P.A.P.; funding acquisition, A.B., J.V. and P.A.P.

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Conflict of Interest

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