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Adolescents' Online Communication Practices in a Digital World

Yalda T. Uhls, Amber van der Wal, Nicole Ellison, Anne Collier, Kaveri Subrahmanyam, and Patti M. Valkenburg

1 Background

Online communication, the exchange of messages via computers or mobile devices, has evolved significantly over the last few decades. Changes encompass features such as video, image, audio, geolocation, and various communication modes (e.g., one-on-one, groups, etc.). The advent of mobile technology has further facilitated asynchronous and nearly instant real-time communication, allowing users to connect with others at any time and place, as long as they have cellular or internet access. It is believed that the constant mobile connectivity provided by smartphones has resulted in unique developmental experiences for contemporary adolescents, which differ from those of previous generations [1–3]. As one teen aptly put it, “I don’t have an addiction to technology, I have an addiction to my friends” [4].

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This chapter aims to highlight research on how adolescents use digital media for communication, along with the positive and negative implications for their social well-being, defined as experiencing high levels of interpersonal connection and low levels of loneliness [5]. First, we discuss recent advancements in modalities that support online communication. Next, we review some of the social mechanisms that may underlie adolescents’ motivation to use digital communication tools. Importantly, we review the critical role online communication plays in the social well-being of many marginalized youth who may be at risk for isolation and rely on these tools for connection with like-minded peers. Finally, we offer suggestions for future research and provide recommendations for stakeholders.

Our focus is on adolescents, defined by the National Academy of Sciences as being between the ages of 10 and 25 [6]. Furthermore, our attention is directed outside of school, where adolescents choose their own methods for digital communication, especially with peers.

2 Current State

2.1 Social Media

Social media are internet-based channels of masspersonal communication in which value is primarily derived from user-generated content [7]. Adolescents connect with others through

using social media for one-to-one or group communication. Types of communication practices vary, with adolescents using tools that allow for direct messaging, video chat, and interaction while gaming, etc. The chapter reviews these particular modalities and their social affordances [8].

2.1.1 Direct Messaging

Instant or direct messaging has been popular since the 1990s. This mode of communication is still widely used, in particular by adolescent girls who report spending on average nearly 2 hours per day on messaging apps such as Instagram and Snapchat [9]. Direct messaging may encourage stronger social connections, possibly due to its private and intimate setting. For example, a mixed-methods study of approximately 1000 Austrian early adolescents found that instant messaging was perceived as the most helpful tool for building friendships compared to other digital tools [10]. Furthermore, in a 2022 focus group study—although large differences existed between adolescents—many adolescents indicated that when they were feeling bad, they would message their friend(s) directly for social support [11]. Direct online communication is also associated with the ability to initiate offline friendships [12]. However, adolescents may also experience a downside of the direct messaging modality. That is, some adolescents, particularly girls, can receive unwanted messages from strangers, such as inappropriate requests and pictures [9, 11].

2.1.2 Video-Mediated Communication (VMC)

The COVID-19 pandemic led to a rapid increase in the adoption of VMC tools, such as Zoom, WhatsApp, and FaceTime. Today, a significant percentage of US adolescents report using VMCs [13]. VMCs offer real-time socially contingent interaction, providing many opportunities to connect with peers.

How does VMC compare to in-person interaction? A pre-pandemic study of over 1700 adolescents, which used experience sampling to

measure online versus in-person interaction, found that in-person communication had more social and emotional benefits, yet respondents also reported experiencing more positive affect when interacting online than when being alone [14]. A study with 2000 participants showed that VMCs, used during the COVID-19 pandemic, were associated with positive social well-being among young people [15]. Thus, when in-person contact is unavailable, as during this pandemic, but also when adolescents are at home or otherwise prohibited from seeing their friends in person [11], VMC can be an important source of social and emotional support.

2.1.3 Social Gaming

While popular media paint a typical videogamer as a 12-year-old boy playing on a console alone in his basement, gaming has become a community sport, where players can communicate as they play [16]. This kind of gaming encourages social connections and can meet developmental needs for interaction with peers. Furthermore, online gaming may lead to offline friendships. For example, researchers interviewed 21 pairs of adult gamers who met on Twitch channels to determine whether they became friends and met in person at a later date and found several dyads did indeed develop close relationships [17]. Similarly, over 10 years, researchers followed the development of friendship ties between Nintendo DS players. The relationships of these gamers went from total strangers to online acquaintances, to online friends, to offline friends [18]. Thus, some adolescents can overcome physical barriers and build relationships through meaningful social interactions while gaming [18]. Moreover, in-person interactions were helpful in validating and maintaining the connections made online. Yet researchers also showed that when the gaming community is larger, fewer opportunities exist for interpersonal connection [17]. Although online communication can facilitate perceived trust and intimacy, in-person interactions gave authenticity to these perceptions and contributed to sustaining the relationships [18].

2.2 Drivers and Consequences of Adolescents' Online Communication

Two important mechanisms seem to drive adolescents' successful use of online communication to form and strengthen both online and offline friendships: self-disclosure and emotional connection. Adolescents' mobile connectivity may also lead to negative consequences, such as feeling overwhelmed, jealous, or left out and "cyberbullying" or online harassment. This chapter now reviews research on these mechanisms and some of the potential benefits and risks.

2.2.1 Self-disclosure

Self-disclosure, which refers to the act of sharing personal information about oneself, is an important mechanism for building social relationships. Research finds that the ability to disclose information about oneself through digital channels can support adolescents' social needs [12]. In a longitudinal study, Valkenburg and colleagues investigated intimate online and offline self-disclosure using self-reports. Results showed that online self-disclosure improved offline communication skills, demonstrating a transfer of developmentally important skills [19]. A recent literature review compared online and offline self-disclosure, revealing that in-person self-disclosure is more beneficial for enhancing relationship quality. Interestingly, the same review reported that some adolescents, such as highly anxious individuals and boys ages 12–13, gain more benefits from online self-disclosure than offline self-disclosure [12]. For these youth, the ability to seek out more information about peers and to respond asynchronously was helpful. Additionally, a systematic review of digital media and adolescents during the COVID-19 pandemic found that online self-disclosure, when conducted with friends, had a positive impact on mental wellness [20].

2.2.2 Emotional Connection

Adolescents often use social media to emotionally connect with others. This is especially true for those adolescents who struggle to establish

connections offline. As one 16-year-old girl said: "I usually find it challenging to make contact with others, but social media makes it easier for me" [11]. Additionally, many adolescents report feeling emotionally connected to their friends by keeping in touch with them throughout the day. In this manner, rather than replacing in-person interaction, social media can add a layer of emotional connectivity to many adolescents' lives [11].

Furthermore, many adolescents use online communication with their peers to attempt to understand and work out emotional responses. A study by Uhls and colleagues [21] found that 6th-grade students in 2017 were better able to read nonverbal emotional cues in photographs than 6th-grade students in 2012. These findings may be explained because online communication shifted from text-based to photo-based applications that enable adolescents to share pictures, often with emotional expressions, with friends [22].

Nevertheless, while online communication could increase emotional understanding and connections for some, it can also result in feelings of distress. A longitudinal study found that adolescents who used online communication to cope with emotional stressors reported more overtly negative emotions 1 week later, mainly related to worry and jealousy [23]. Relatedly, some adolescents reported feeling left out or jealous, particularly when they received messages about friends hanging out without them. Finally, many adolescents appear to feel pressure to be constantly available or responsive to peers via online communication [9, 11].

2.2.3 Cyberbullying

While a review of cyberbullying is beyond the scope of this chapter, much of the literature on the negative consequences of online communication focuses on cyberbullying. Nearly half of US teens reported experiencing some form of cyberbullying in a recent Pew study [24]. The literature also shows that cyberbullying—both perpetration and victimization—is a complex issue that involves both individual and contextual factors [25]. For example, individual predictors of cyberbullying perpetration and victimization include low self-esteem and empathy, as well as factors

such as age, gender, and poor psychosocial adjustment [26]. Contextual factors that may predict cyberbullying are peer influence and parental monitoring [25].

Complicating this issue, Marciano and colleagues conducted a meta-analysis of longitudinal studies and found that cyberbullying perpetration and victimization were related to each other over time, indicating a bidirectional relationship between the two, meaning that victims may become perpetrators of cyberbullying and vice versa [27]. Other research found that individuals who engage in offline bullying are also likely to engage in online cyberbullying [28]. Similarly, individuals who are victimized offline are also at an increased risk of being victimized online. As such, it is important to recognize that online and offline bullying are often interrelated, just as victimization and perpetration are, and effective prevention and intervention strategies should take this into account.

2.2.4 Vulnerable Groups

In this chapter, we want to pay special attention to the role of online communication in the lives of adolescents from different vulnerable or marginalized groups, such as adolescents struggling with mental or physical health issues, queer¹ youth, and adolescent girls. For some of these groups, there seem to be substantial benefits to online communication, which provides possibilities, support, and understanding that may not be available offline [29]. Research shows that queer youth are more likely to have close supportive online friendships compared to offline friendships (50% versus 19%) [29, 30]. Similarly, adolescents who have Autism Spectrum Disorder or a chronic illness find online spaces and communication helpful for building relationships with others who have similar experiences [31].

Moreover, online communication can provide an anonymous way for individuals to disclose

personal information [32]. This can be particularly useful for some types of support and information-seeking, such as asking about stigmatized health conditions or for sexual minority youth who may not feel comfortable discussing their sexuality with others in person [32].

The use of online communication tools also poses risks for vulnerable adolescents [9]. Girls and queer youth, in particular, may be at higher risk for online harassment and cyberstalking. Other research find that harmful behavior can be normalized. For example, in an anonymous online communication setting where they feel understood, some adolescents can share self-injury-related content, with the consequent risk of possibly instigating such harmful behaviors for others [33]. This could also result in a negative reinforcing spiral among the members of a particular subgroup. In conclusion, while online communication tools can provide valuable support and resources for vulnerable groups, it is essential to be aware of the potential risks and to take steps to mitigate them.

3 Future Research

While the corpus of scholarship on this topic is much more robust than 20 years ago, more work is needed to account for the nuances of online communication tools and the myriad and constantly evolving set of social media practices adolescents engage in. Future research should expand in several critical areas:

1. *Comparative studies across different cultures and socioeconomic backgrounds:* While much of the current research focuses on adolescents from WEIRD (White, Educated, Industrialized, Rich, and Democratic) populations, a need exists to understand how online communication impacts youth in diverse environments globally.
2. *Individual differences in adolescents' online communication and social well-being:* Research increasingly recognizes the signifi-

¹The word “queer” is a term that is being reclaimed by many people, particularly those in younger generations. It is meant to describe sexual or gender orientation that is not heterosexual or cisgender.

cant variability in how adolescents engage with online communication tools and the resulting impacts on their social well-being. Future studies should delve deeper into the factors contributing to these individual differences. This approach will enhance our comprehension of why certain adolescents thrive in digital environments while others may struggle. Understanding these nuances can help in tailoring interventions that support healthy online interactions tailored to individual needs and circumstances.

3. *Role of artificial intelligence and emerging technologies:* As AI becomes increasingly integrated into social media platforms, understanding its influence on social interactions and their consequences becomes crucial. Future research should investigate how AI-based technologies might alter interpersonal dynamics and self-perception among adolescents. For instance, algorithmically-generated recommendations on platforms like TikTok can feel to users as if they are reflecting elements of their own identity and help users find like-minded communities [34], but these systems can also privilege content from some users, leading to users with marginalized social identities feeling stigmatized or invisible [35].

4 Recommendations

4.1 For Youth

- *Critical thinking and decision-making:* Adolescents should be educated on strategic online communication choices, helping them evaluate the best settings, people, and communication modes (private vs. public) based on their own needs and circumstances.
- *Digital literacy enhancement:* Adolescents should learn to become savvy digital citizens, understanding both the functionality of digital tools and the broader implications of their online actions, including privacy concerns and the permanence of online footprints.

4.2 For Parents and Guardians

- *Active participation in digital activities:* Parents should engage with their children's online activities to better understand their social interactions and guide them in managing online relationships.
- *Promotion of open communication:* An environment should be fostered where children feel free to discuss their online experiences and challenges without fear of parental judgment or undue restriction.

4.3 For Tech Companies

- *Promote positive online experiences:* Platforms should be designed to encourage positive interactions and discourage negative behaviors by using algorithms that prioritize promoting positive communication and demote harmful content such as cyberbullying and misinformation.
- *Collaborate with adolescent researchers:* Platforms should engage with adolescent researchers to design tools that safeguard young users while fostering innovation and freedom of expression.
- *Implement ethical AI practices:* Platforms should ensure that AI systems used on social platforms do not perpetuate biases and are regularly audited for ethical compliance, particularly to prevent unfair treatment of specific groups of users.

4.4 For Policymakers

- *Regulations that protect young users:* Regulations should compel social media platforms to prioritize the safety and wellbeing of adolescent users. These regulations should include robust measures to protect against online sexual exploitation and data exploitation. Simultaneously, such regulations must also uphold the rights of young users to free and open communication and consider indi-

vidual differences and both positive and negative use. The recent implementation of the Digital Services Act in Europe serves as a promising example of such protective measures.

- *Promote public education campaigns:* Implement national campaigns to raise awareness about the benefits of online communication for adolescents as well as the risks, and in addition educate the public on how to support young people in navigating these spaces safely.

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