

Digital Life and Youth Well-being, Social Connectedness, Empathy, and Narcissism

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abstract

Youth well-being, social connectedness, and personality traits, such as empathy and narcissism, are at the crux of concerns often raised about the impacts of digital life. Understanding known impacts, and research gaps, in these areas is an important first step toward supporting media use that contributes positively to youth's happiness, life satisfaction, and prosocial attitudes and behaviors. By examining existing work addressing these issues across domains, we found that a complex interplay of individual factors, type of digital media engagement, and experiences in media contexts informs outcomes related to well-being, social connectedness, empathy, and narcissism. We argue that further research is needed to uncover how, where, when, and for whom digital media practices support positive well-being and social connectedness outcomes. Specifically, research needs to move beyond correlational studies to uncover causal connections between traits like narcissism and media use. Longitudinal studies are also needed to explore patterns of media use over time and related impacts. Further research is needed to explore how specific technologies can be designed to support positive well-being, social outcomes, and prosocial personality traits. Finally, research is needed regarding parenting, educational practices, and policies that support positive digital media use and related outcomes. Although existing research suggests that digital life has mixed potentials and effects for well-being, social connectedness, empathy, and narcissism, we provide recommendations for clinicians, policy makers, and educators in partnering with caregivers and youth to support media use that promotes positive outcomes in these areas.

Youth well-being, social connectedness, and personality traits, such as empathy and narcissism, are at the crux of concerns often raised about the impacts of digital life. Parents, educators, pediatricians, policy makers, and youth themselves are among the stakeholders with an interest in mitigating negative consequences and supporting positive impacts of digital media use, particularly given its growing presence in youth's everyday lives. Understanding known impacts, and research gaps, in these areas is an important first step toward supporting media use that contributes positively to youth's happiness, life satisfaction, and prosocial attitudes and

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behaviors. In this paper, we provide an overview of salient research findings, questions for further study, and related recommendations. We focus primarily on teenagers (ages 13–18), drawing to a lesser degree on relevant research involving slightly younger and older youth.

CURRENT STATE

Well-being

Well-being involves “optimal psychological functioning and experience.”¹ In the context of research on digital life, relevant dimensions of well-being span subjective experiences (eg, affect, life satisfaction, self-esteem, social connectedness), mental health (eg, depression), and physical behaviors (eg, exercise). We describe research related to these dimensions and addressing the general population of youth who are not specifically at risk for or struggling with a psychological condition. That is, these studies are primarily drawn from normative samples, for instance, the studies did not purposefully recruit from patient populations with depression or anxiety.

Positive Implications for Well-being

Among 13 to 17 year-olds with social network profiles, percentages who indicate positive well-being markers are as follows: increased self-confidence (20%), self-esteem (15%), and being outgoing (28%), reduced shyness (29%), and depression (10%).²

Interventions have been designed to target well-being explicitly by supporting healthy behaviors and habits (eg, daily exercise, reflection, medication adherence) through applications, games, and online social reinforcement and feedback.³ Emerging technologies such as wearable devices have the potential to support socio-emotional competencies (eg, self-regulation) through in situ interventions.⁴

Networked technologies offer new mechanisms for accessing mental health services.⁵ Online communities can facilitate support-seeking behavior with far greater ease than is possible offline. Applications and Web sites have been designed to facilitate formation of support networks for a range of issues, including addictions and explorations of sexuality.⁵ The ability to communicate anonymously can mitigate barriers, such as shame, that interfere with support-seeking offline.⁶

Negative Implications for Well-being

Several investigations document correlations between heavy media use and reduced well-being–related outcomes, such as diminished life satisfaction, internalizing negative experiences, and various dimensions of ill-being, such as depression, anxiety, attention problems, and stress.⁷ Evidence from other studies, however, point to a more nuanced relationship. Specific outcomes are related to the type of technology used,⁸ what individuals disclose online and how others respond,⁹ and the content with which they interact.¹⁰

The relevance of the aforementioned mediators is well-illustrated with specific examples: a young social media user who seeks support online and is ignored by his friends feels worse as a function of his media use, while a peer who receives support feels better.^{9,11} For adolescent girls, 1 study found overall time spent on Facebook was unrelated to body image, but the extent of appearance-oriented content in their online peer networks was important.¹⁰

SOCIAL CONNECTEDNESS

Social connection is a fundamental human need. Children and teenagers develop social skills as they grow and practice strategies to fulfill their needs for family, friendship,

and intimacy. Increasingly, these strategies leverage networked technologies. Consequently, today’s adolescents require specific supports and coping skills to prepare them for a digitally connected society.¹¹

Positive Implications for Connectedness

Supporting Existing Connections

Ninety-two percent of adolescents aged 13 to 17 go online daily, with 73% having access to a smartphone¹² and 45% reporting daily use of social media at an average of 2 hours per day.² A majority of teenagers (52%) indicate that social media “mainly helps” relationships with friends.² Teenagers use social media, video chat, texting, and instant messaging to socialize, make plans, provide support, and collaborate on homework.^{13,14} For younger children, technologies such as Video Playdate¹⁵ demonstrate that children as young as 7 years old can participate in free play activities over video chat with a shared video-mediated surface. Video-based technologies have been shown to support meaningful conversation between children and geographically-separated family members, supporting a sense of family identity and allowing distant adults to participate in children’s lives.¹⁶

Forming New Connections

Fully 57% of teenagers have met a new friend online, often on social media sites like Facebook and Instagram or by playing networked video games.¹³ Social media have been used to connect youth with disabilities,¹⁷ providing needed social support and helping them to feel a sense of belonging. Digital technologies also help youth find others with shared interests, no matter how seemingly obscure.¹⁸ For example, young fanfiction writers report feelings of connection to online communities such as

Fanfiction.net as they share and receive feedback on their writing.¹⁹

Negative Implications for Social Connectedness

Tensions Between Online and Offline Communication

The presence of mobile phones and other devices can inhibit intimacy when interacting with others face-to-face. A third of teenagers (34%) at least “somewhat” agreed that using social media detracts from time they could be spending with people face-to-face, and 44% at least “somewhat” agreed that using social media often distracts them from people they are with in person.²

Digital technologies can at times lead to a disconnection between online and offline interactions. The asynchronous, screen-based nature of online communication makes it feel less risky or uncomfortable for some young people to share personal feelings with friends.²⁰ Youth have described an odd sense of disconnection between the personal conversations they have with friends online and the more surface-level conversations with these same friends offline.

New Friendship Obligations

As youth communicate in and through digital contexts, they also navigate norms and expectations about what it means to be a friend or romantic partner. For example, youth describe efforts to manage the quantity of communication in intimate relationships as they confront challenges related to “feeling smothered” by expectations of 24/7 connectedness.²¹ Social media also provide venues for offering real-time peer affirmation. Adolescents convey their support for friends through “liking,” commenting, and favoriting friends’ posts, and even worry about missing friends’ social media posts.^{18,20} These opportunities to connect directly with friends and to show support

publicly can be double-edged in facilitating closeness and generating pressures to maintain and perform intimacy.

EMPATHY AND NARCISSISM

Empathy and narcissism are personality traits concerning the relative focus on others versus the self. Some research indicates increases in narcissism and decreases in empathy among American young adults since the late 1970s.²² The extent to which digital technologies affect empathy and narcissism in youth is an important research question. Unfortunately, research conducted to date does not provide a clear answer.

In a recent review of online communication and well-being from 2003 to 2013,¹¹ emerging evidence from multiple studies demonstrated that teenagers are more willing to disclose personal information and display more emotionally empathic online communication than adults. Teenagers also display moral sensitivity online; empathic concern for how close friends might be affected by online posts.²³ Yet, research with teenagers and young adults also suggests that youth are more prone to think about their online activities from a largely self-focused perspective (ie, how an online posting might result in a positive or negative consequence for one’s self).²³ Such studies indicate that individuals can exhibit both narcissism and empathy, although to varying extents in different contexts.

Existing research suggests that narcissistic people use social networking sites more frequently and in more self-promoting ways than less narcissistic people.²⁴ One problem with this research is that it is difficult to know whether social media usage increases narcissism, whether narcissistic people are drawn to the online “hall of mirrors,” or whether there is some other

explanation for these relationships. However, one recent diary study suggests that social media usage at 1 time point does not necessarily cause increases in narcissism 4 days later.²⁵

Turning to prosocial traits, 1 study of young adults found that the more time girls spent in front of a screen, the lower their cognitive empathy was.²⁶ The same study found that more time online was associated with more face-to-face communication among both boys and girls. This study was correlational, making causal inferences difficult. A more recent study that followed teenagers over a 1-year period found that those who used social media more at the beginning of the study had higher cognitive and emotional empathy scores 1 year later.²⁷

FUTURE RESEARCH

The current review suggests that digital life has mixed potentials and effects for well-being, social connectedness, empathy, and narcissism. Accordingly, media effects are increasingly understood as informed by a complex interplay among individual factors, differences in susceptibility to media effects, and media experiences.²⁸

Critical questions for further research include the following:

- How, where, when, and for whom does digital media use support positive well-being outcomes, social connectedness, and empathy? Further studies are needed to identify the individual, contextual, and technological factors and mechanisms that support positive versus negative uses and outcomes of digital media. For example, cross-sectional studies can investigate practices, experiences, or outcomes of interest among groups of youth who differ with respect to individual factors (eg, social media use, mental health) and/or

community contexts. Prospective cohort studies can follow digital media use among a clinical population of interest, to explore mechanisms by which digital media support or interfere with recovery.

- What kinds of digital technologies promote patterns of use that support positive well-being, social connectedness, and empathy? Design and implementation research is needed to explore how video games, mobile applications, and design features of social media can act as positive interventions supporting well-being and positive social connections.²⁹ For instance, investigations of the effectiveness of mobile technology tools designed to build empathy are being conducted,²⁹ but further research in this area is warranted.
- How can we move beyond correlational and self-report studies to gain more accurate insights into youth's uses of digital media and their outcomes? There is a clear need for more research that leverages technologies to study digital media usage directly and related causal effects on well-being, social connectedness, empathy, and narcissism. For instance, longitudinal study designs that can examine directionality of digital media effects are key. Other studies might involve experience sampling methods to track

real-time emotional and well-being states while using digital media devices.

- How can parenting, educational supports, and policy further support known positive well-being and social connection outcomes? Research is needed to understand the kinds of adult supports and messages, curricula, and policies that support positive digital media uses and outcomes. For instance, a study of state-by-state educational standards that include or do not include digital literacy and citizenship can be correlated with student self-report data on social connectedness or readiness to enter the digital workforce.

RECOMMENDATIONS

Clinicians and Providers

Pediatricians can encourage parents and/or caregivers to learn about the social media sites and applications used by their children. Pediatricians can also discuss with caregivers the potential value of creating digital curfews to increase health and well-being, particularly for younger youth or at-risk adolescents. During clinic visits, ask children and teenagers about the quantity and content of their digital use, including the nature and frequency of distressing digital experiences and how socially supportive their online networks are.

Policy Makers

In light of the recent National Education Technology plan, policy makers should support youth around digital media and well-being, including digital citizenship as a foundational skill.³⁰ Policy makers can also encourage the media and technology industry to partner with researchers and community stakeholders (ie, parents, educators, and clinicians) to produce more prosocial content in products with the potential to enhance empathy, a positive self-concept, and social connections.

Educators

We encourage teachers to attend media literacy and digital citizenship professional development workshops to support their students' positive well-being online. Educators can also harness the positive side of networked technologies by creating class assignments that use blogs, wikis, and private Facebook pages to promote collaboration and productive exchange of ideas.

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REFERENCES

- Ryan RM, Deci EL. On happiness and human potentials: a review of research on hedonic and eudaimonic well-being. *Annu Rev Psychol.* 2001;52(1):141–166
- Rideout V. The common sense census: media use by tweens and teens. Available at: <https://www.common-sense-media.org/research/the-common-sense-census-media-use-by-tweens-and-teens>. Accessed November 10, 2015
- Consolvo S, Klasnja P, McDonald DW, Landay JA. Designing for healthy lifestyles: design considerations for mobile technologies to encourage consumer health and wellness. *Found Trends Hum-Comput Interact.* 2012;6(3–4):167–315
- Slovák P, Fitzpatrick G. Teaching and developing social and emotional skills with technology. *ACM Trans Comput Hum Interact.* 2015;22(4):1–34
- Aguilera A, Muench F. There’s an app for that: information technology applications for cognitive behavioral practitioners. *Behav Ther (N Y N Y).* 2012;35(4):65–73
- Weinstein EC, Selman RL, Thomas S, Kim JE, White AE, Dinakar K. How to cope with digital stress: the recommendations adolescents offer their peers online. *J Adolesc Res.* 2016;31(4):415–441
- Clifton A, Goodhall DL, Ban S, Birks S. New perspectives on the contribution of digital technology and social media use to improve the mental wellbeing of children and young people: a state of the art review. *Neonatal Paediatr Child Health Nurs.* 2013;16(1):19–26
- Rosen LD, Lim AF, Felt J, et al. Media and technology use predicts ill-being among children, preteens and teenagers independent of the negative health impacts of exercise and eating habits. *Comput Human Behav.* 2014;35:364–375
- Frison E, Eggermont S. The impact of daily stress on adolescents’ depressed mood: the role of social support seeking through Facebook. *Comput Human Behav.* 2014;44:315–325
- Meier EP, Gray J. Facebook photo activity associated with body image disturbance in adolescent girls. *Cyberpsychol Behav Soc Netw.* 2014;17(4):199–206
- Best P, Manktelow R, Taylor B. Online communication, social media, and adolescent wellbeing: a systematic narrative review. *Child Youth Serv Rev.* 2014;41:27–36
- Lenhart A. Teens, social media & technology overview 2015. Available at: www.pewinternet.org/files/2015/04/PI_TeensandTech_Update2015_0409151.pdf. Accessed September 10, 2015
- Lenhart A, Smith A, Anderson M, et al. Teens, technology, and friendships. Available at: www.pewinternet.org/files/2015/08/Teens-and-Friendships-FINAL2.pdf. Accessed November 10, 2015
- Boyd D. *It’s Complicated: The Social Lives of Networked Teens*. New Haven, CT: Yale University Press; 2014
- Yarosh S, Inkpen K, Brush AJ. Video playdate: toward free play across distance. In: *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*; April 10-15, 2010; Atlanta, GA. 1251–1260
- Yarosh S, Chew YC, Abowd GD. Supporting parent-child communication in divorced families. *Int J Hum Comput Stud.* 2009;67(2):192–203
- Raghavendra P, Newman L, Grace E, Wood D. ‘I could never do that before’: effectiveness of a tailored Internet support intervention to increase the social participation of youth with disabilities. *Child Care Health Dev.* 2013;39(4):552–561
- Weinstein E, Davis K. Connecting ‘round the clock: mobile phones and adolescents’ experiences of intimacy. In: Yan Z, ed. *Encyclopedia of Mobile Phone Behavior*. Vol 1–3. Hershey, PA: IGI Global; 2015:937–946
- Ito M, Horst HA, Antin J, et al. *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media*. Cambridge, MA: The MIT Press; 2009
- Gardner H, Davis K. *The App Generation: How Today’s Youth Navigate Identity, Intimacy, and Imagination in a Digital World*. New Haven, CT: Yale University Press; 2013
- Weinstein EC, Selman RL. Digital stress: adolescents’ personal accounts. *New Media Soc.* 2016;18(3):391–409
- Zarins S, Konrath S. Changes over time in compassion-related variables in the United States. In: Seppälä E, ed. *Handbook of Compassion Science*. London, UK: Oxford University Press; 2016
- Flores A, James C. Morality and ethics behind the screen: young people’s perspectives on digital life. *New Media Soc.* 2013;15(6):834–852
- Liu D, Baumeister R. Social networking online and personality of self-worth: a meta-analysis. *J Res Pers.* 2016;64:79–89
- Walters NT, Horton R. A diary study of the influence of Facebook use on narcissism among male college students. *Comput Human Behav.* 2015;52:326–330
- Carrier LM, Spradlin A, Bunce J, Rosen LD. Virtual empathy: positive and negative impacts of going online upon empathy in young adults. *Comput Human Behav.* 2015;52:39–48
- Vossen HG, Valkenburg PM. Do social media foster or curtail adolescents’ empathy? A longitudinal study. *Comput Human Behav.* 2016;63:118–124
- Valkenburg PM, Peter J. The differential susceptibility to media effects model. *J Commun.* 2013;63(2):221–243
- Konrath S. Positive technology: using mobile phones for psychosocial interventions. In: Yan Z, ed. *Encyclopedia of Mobile Phone Behavior*. Vol 1–3. Hershey, PA: IGI Global; 2015:871–897
- U.S. Department of Education. Future ready learning: reimagining the role of technology in education. Available at: <http://tech.ed.gov/netp/>. Accessed December 10, 2015

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