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# Identity, relationships, sexuality, and risky behaviors of adolescents in the context of social media

Stefano Eleuteri <sup>a</sup>, Valeria Saladino<sup>b</sup> and Valeria Verrastro<sup>b</sup>

<sup>a</sup>Department of Psychology, Sapienza University of Rome, Rome, Italy; <sup>b</sup>Department of Humanities, Social, and Health, University of Cassino and Southern Lazio, Cassino, Italy

## ABSTRACT

The use of social networking services (SNSs) has been reported as one of the favorite activities for adolescents. Over the past decade, SNSs have become some of the most important venues for connecting, communicating, and socializing, as well as identity-building and self-expression. Adolescence is the phase during which individuals construct a critical part in the process of constructing their sexual identity and gender. In the literature, it is suggested that SNSs have become venues for young people to construct and express themselves, and this can produce positive and negative effects. SNSs offer several opportunities for adolescents to explore their sexuality, and cybersex is often the first activity through which teenagers can explore their sexuality freely and without biases. SNS use inevitably affects and is related to adolescents' sexuality and relationships with peers, sometimes with increasing inclination to risk-taking attitudes and related behaviors. Therefore, our aim of this paper was to explore and address the way in which social media and SNSs are affecting and changing not only adolescent sexuality, but also the type of relationship adolescents establish in their first sexual experiences, including possible risky consequences like cyberbullying, sexting, revenge pornography, excessive use of the Internet, and risky sexual behaviors. Specifically, research will be discussed on the development and evolution of sexuality of adolescents and young adults, also illustrating the clinical consequences.

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Adolescent relationship; adolescent sexuality; social media; social networks; risk behavior

## Introduction

Social media is the collective of online communication channels dedicated to community-based input, interaction, content sharing, and collaboration. They can be described as the future of communication, a countless array of Internet-based tools and platforms that increase and enhance the sharing of information. They now represent another place where people socialize, with online social networks being one of the most important venues for connecting, communicating, and socializing, as well as for identity-building and self-expression, and as the favorite activity for adolescents, alongside face-to-face communication with peers.

According to recent research in the United States, teenagers throughout the country regularly use the Internet, cellphones, and video games to gather information and communicate with each other (Lenhart, 2015). This ability to interact with others is the unique feature of social media, which provides powerful new ways for teens to create and navigate their social environments. The important aspect of teens' use of social media is that it occurs simultaneously with their developing identity, emerging sexuality, physical development, and moral consciousness, becoming an influence between the other aspects like their identity construction, sexuality, and relationships.

## Literature review

### *Adolescent identity development and social media*

Adolescence is considered a pivotal time in identity development as young people explore various ways to present themselves and “be” in the world (Sadowski, 2008). Identity development involves an adolescent's active search for their role, contemplation of personal strengths and weaknesses, and the ability to make meaning of their context and experiences (Lloyd, 2002). This phase, as historically explained by Erikson (1968), is focused on the struggle between identity and identity confusion. The cognitive and socioemotional development occurring helps to lead feelings, personal coherence, and consistency. To construct our identity, we need an individual's interpretation of context and other mediating events to support healthy identity formation (Kroger, 2000).

Steinberg (2008) stated that the adolescent brain develops using the following strategies: decision-making, emotional and social reactions, and identity exploration. Adolescence is a developmental period characterized by suboptimal decisions, and actions that are associated with an increased incidence of unintentional injuries, violence, substance abuse, unintended pregnancy, and sexually transmitted infections (STIs) (Eaton et al., 2006). It is also a phase of increased emotional reactivity. During this period, the social environment is changing such that more time is spent with peers versus adults, and more conflicts arise between the adolescents and their parents (Steinberg, 1989).

There are a multitude of elements working inside the brain of a teenager when it comes to making good decisions. These include cognitive, psychological, social, cultural, and societal factors. Researchers have found that adolescents find it more difficult to control impulsive behaviors if they are with their peers or if high emotions are involved. Examples include delinquent behavior in peer groups and at-risk behavior caused by decreased emotion regulation abilities (Menting, Van Lier, Koot, Pardini, & Loeber, 2016; Russell, Heller, & Hutchison, 2017). In a recent review of the literature on human adolescent brain development, Yurgelun-Todd (2007) suggests that cognitive development during adolescence is associated with progressively greater efficiency of cognitive control and affective modulation. An increase in activity in the prefrontal regions as an indication of maturation (Rubia et al., 2000, 2006; Tamm, Menon, & Reiss, 2002), and diminished activity in irrelevant brain regions (Brown et al., 2005; Durston et al., 2006; Monk et al., 2003) are described as the neurobiological explanation for the behavioral changes associated with adolescence. This general pattern of improved cognitive control and emotion regulation with maturation of the prefrontal cortex suggests a linear increase in development from childhood to adulthood. In addition, goal-directed behavior requires the control of

impulses or delay of gratification for optimization of outcomes, and this ability appears to mature across childhood and adolescence.

Social media has the power to influence a teen's decision-making skills by connecting them to their peers. This can especially impact health-risk behaviors like the use of alcohol and tobacco (Halpern-Felsher, Baker, & Stitzel, 2016). Teenagers are able to be connected to social media 24 hours a day and 7 days per week, allowing them constant exposure to carefully molded profiles that project perfected images. Social media has been known to evoke anxiety, low self-esteem, and depression problems in teenagers (Woods & Scott, 2016). Thus, people, especially teenagers, work feverishly on maintaining their reputation on social media.

### ***The influence of social media on adolescent relationships and sexuality***

Adolescence is a period of development characterized by psychophysical maturation processes. Two fundamental elements of this period are relationship and socialization (Khan, Gagné, Yang, & Shapka, 2016). The latter emerges with the first couple relationships, in which teenagers experiment with themselves in a new role, different from that of a child (Catharine, 2016). This new role requires greater self-awareness and leads to the development of identity, which is the primary goal of adolescence (Peter & Valkenburg, 2008).

Nowadays, the Internet and social media represent an accessible manner to discover and explore human sexuality without restrictive sexual standards (Griffiths, 2012). In Europe, many adolescents use the Internet almost every day at home and without parental control (Livingstone, Bober, & Helsper, 2005). Adolescents use the Internet for various purposes, such as keeping in contact with friends or partners. In particular, some of them have used it for online sexual activities (OSA), especially for cybersex. Research on OSA among adolescents shows that adolescents actively explore the Internet looking for sexual material, and frequently communicate about topics of a sexual nature (Braun-Courville & Rojas, 2009). While OSA can be seen as a means of sexual exploration, important and healthy in the context of adolescent development, such activities can also be categorized as risky behaviors, potentially entailing negative consequences and experiences (Baumgartner, Valkenburg, & Peter, 2010; Tripodi et al., 2015). Some scholars hypothesize that particular characteristics of adolescents, such as lack of control and sensation-seeking, facilitate the risky use of cybersex, because adolescents do not have enough understanding and development to distinguish healthy and unhealthy use of it (Freeman-Longo, 2000).

Interactions in cyberspace lower our inhibitions, accelerate intimacy, and produce an identity that may not correspond with the self that we present in person (Hertlein & Blumer, 2013). Because self-disclosure is the hallmark of intimate exchange, and because we disclose far more readily using digital technologies, we often experience an accelerated process of intimacy. Researchers call this the “hyperpersonalization effect” (Ramirez & Wang, 2008). Establishing interpersonal connections, both with peers and with romantic partners, is one of the most important developmental tasks in adolescence.

As electronic media technologies have become important means of communication with others, it is important to consider them in the context of the interpersonal relationships in adolescents' lives. Teens feel less psychologically close to their instant messaging partners than to their partners in phone and face-to-face interactions (Knop et al., 2016). Teens also find instant messaging less enjoyable than, but as supportive as, computer or

face-to-face interactions (Lengacher, 2015; Tang & Hew, 2017). They find instant messaging especially useful to talk freely to members of a gender different from their own. Despite this, teenagers report greater satisfaction in relationships with partners met offline (Vinti, Wheldon, McFarlane, Brogan, & Walsh-Buhi, 2016). Teens have so wholly embraced instant messaging, despite its perceived limitations, because it satisfies two important developmental needs of adolescence. These needs are connecting with peers, and enhancing one's group identity – each of which occurs through enabling teens to join peers of cliques or crowds online and offline without more formal rules.

The Internet and social media have also expanded the access to sexually explicit content and pornography; this increased access, coupled with the reality of teen's sexual identity development and exploration, has meant that teens are more likely to be exposed to explicit sexual material than adolescents in prior generations (Ballester-Arnal, Giménez-García, Gil-Llario, & Castro-Calvo, 2016). Indeed, a significant number of adolescents reported having their first sexual experience online (Gravningen, Aicken, Schirmer, & Mercer, 2016; Braun-Courville & Rojas, 2009). In several studies, researchers have found that inadvertent exposure to sexual media in childhood and adolescence often has negative emotional effects, such as shock, disgust, or embarrassment, and that these effects can be enduring (Bushman & Cantor, 2003).

### ***Identity, technology, and risks***

Technology and social networks have changed the way teenagers interact with each other. The Internet and social networks decrease distance and give the opportunity for those who are distant, friends or couples, to communicate. However, this immediate communication also presents various risks and disadvantages. One of these is the difficulty in managing social networks in a functional way. In fact, many teenagers become addicted<sup>1</sup> to the Internet, online video gaming, or online gambling (Griffiths, 2000). Indeed, technological tools can be like “psycho technologies,” because they represent reality and affect the human mind. This characteristic can facilitate such out of control or addict-like behaviors, especially in those who have psychotic traits, low self-esteem, and problems at school and in their families (Munno et al., 2017).

For the family, it becomes increasingly complicated to control children who are closed and evasive about leisure time management. Nowadays, it is always easier to observe children remaining at home than having experiences outside (Li, Hietajärvi, Palonen, Salmela-Aro, & Hakkarainen, 2017). An example is the phenomenon of hikikomori,<sup>2</sup> where children lock themselves in a room while connected to the Internet all day long (Husu & Välimäki, 2017). Hikikomori syndrome is primarily culture-bound to Japan, and may be an example of Internet addiction. Those experiencing hikikomori syndrome have a progressive decrease in school performance, less disclosure in family interaction, emotional distance, and sleep problems (De Luca, 2017). These adolescents live in a fugue-state facilitated by overuse of technology, and their identity is fragmented. The worrying thing is that through this process, adolescents have difficulty becoming independent and following normative identity and social development. In such a state, adolescents lose a sense of being connecting to their life systems, and instead become part of the web system (Zilberstein, 2013).

Lack of knowledge about risk by parents implies that they are unable to handle dangerous situations. Internet-related risks not only affect the frequency with which teenagers are connected, but also what can happen online. For instance, according to findings from a recent survey study, which involved respondents aged 18–30, 23% of respondents had been victims of revenge pornography, 93% suffered emotional distress related to interactions online, and 51% reported that they had considered the possibility of committing suicide in the context of experiencing certain online exchanges (Franks, 2016). These data show how easy it is to be a survivor/victim of abuse or online acts. Social networks give us the impression that we have an audience with whom we confront (Salmela-Aro, Upadaya, Hakkarainen, & Lonka, 2016). The shortage of privacy that is spreading breaks the boundaries between us and others, even if paradoxically the relationships are more superficial and less intimate.

Adolescence is also a period in which young people of all genders feel the need to find their own identity. In the past, the teenager had to include their family, peers, and school in their own developmental process. Today, they must also include cyberspace – where it is more difficult to find oneself and where there is the risk of losing oneself. In their study, Shifflet-Chila, Harold, Fitton, and Ahmedani (2016) collected 128 interviews with teenagers aimed at investigating autonomy and identity in the digital age, and exploring conversations adolescents have with their parents about the use of technology. Thematic analysis revealed two major themes. First, adolescents spoke with their parents about their expertise on using technologies and social networks. Another aspect is the sense of pride adolescents felt in their own ability and the parents' acknowledgement of this ability. Participants also did not perceive a need of supervision by their parents, but thought that younger teenagers and children must to be more controlled while using social networks. Through this study, the researchers showed that the use of social networks and technologies is something adolescents are proud of, and want their parents to be proud of them for as well. However, parents often continue to demonstrate what may be a generation gap by not always being proud or even accepting of their teens' technology use (Valenzuela, Bachmann, & Aguilar, 2016).

New technologies affect the way teenagers see themselves and raise a conflict between the unidentified identity of the adolescent and their desire to be seen. This desire can lead the adolescent to expose themselves online (Barry, Doucette, Loflin, Rivera-Hudson, & Herrington, 2017). An example is the use of selfies<sup>3</sup> to present themselves in social media and to gain followers. In the modern age, digital performance via social media is a task of development. The number of likes, comments, and followers reflects a teenager's online identity and sense of self-efficacy and self-esteem. For example, college students who identify as being more shy offline perceive Facebook as a safe and enjoyable place for self-disclosure (Sheldon, 2013). Thus, due to having a higher degree of online exposure in comparison to more mature adults, adolescents may have a higher likelihood of becoming cyber victims (Young, Subramanian, Miles, Hinnant, & Andsager, 2016).

Another important aspect of the use of selfies is the correlation with identity and social reputation. Social networks are becoming more and more like the real world – in that connecting with people online is almost an approximation of connecting with people offline (Hertlein & Blumer, 2013). Most teenagers do not send just one selfie, but they exchange different selfies. This method gives a feeling of inclusion in the world, and a sense of tangible presence (Allen, 2015).

Sexting<sup>4</sup> can be another modern way in which teenagers can experiment with identity, particularly sexual identity (see Courtree & Shaughnessy; Hertlein, Nakamura, Arguello, & Langin; and Twist, Belous, Maier, & Bergdall, this issue, for more on sexting in relationships). Strassberg, McKinnon, Sustaita, and Rullo (2013) have studied the incidence of the phenomenon of sexting among 606 high school students. Their research showed that 20% of all participants had at some point sent sexually explicit photos via cellphone while at least twice that many had received sexually explicit photos via cellphone. Significantly more males (49.7%) than females (30.9%) reported having received a sext. As for the age, younger males received and sent sexually explicit messages more than senior males (26.5% vs. 9.2%). Among female participants, there were no significant differences among age groups. Generally speaking, 5.9% of females and 4.4% of males view sexting as a personal choice (Strassberg et al., 2013).

From this study, the data we found most revealing are those related to the respondents' beliefs and activities around forwarding sext messages to others. Indeed, over 25% of all participants forwarded the pictures sexted to them to other people while 50.4% of females and 33.9% of males reported thinking that it is always wrong to send or forward sext or sexually explicit photos (Strassberg et al., 2013). Among the participants, 26.1% of females and 31% of males declared that it is acceptable to send pictures of themselves, but not of other people. 1.5% of females and 3.8% of males thought that it was acceptable to forward pictures, but not to be the first one to send a picture. A small group of participants (5.1% of females, 12.2% of males, respectively) said that it was acceptable to send, receive, and forward pictures (Strassberg et al., 2013).

Finally, only 26% of all participants responded to an open-ended question asking what they believed were (if any) the current legal consequence for sexting, and their responses included things like cyberstalking, child pornography charges, and engagement in sexually offensive activity (Strassberg et al., 2013). The low response to this question is particularly jarring considering that sexting can become sexual coercion or cyberbullying when photos, videos, or text messages are shared without permission or with coercion (Gross, 2017). Therefore, sexting has a role in sexual violence, because people can interpret sexting as a sexual consent in online and offline environments (Dir, 2017). Sexting also can play a part in cyberbullying, which can lead to experiences of humiliation and embarrassment, reduced social status, damaged relationships, depressive symptoms, and suicidal ideation (Medrano, Rosales, & Gámez-Guadix, 2017).

In recent years, there has been an increase in new forms of sexual violence and aggressive behavior. Technology and social networks have provided new opportunities for sexually aggressive behaviors like revenge pornography, cyberstalking, sexual coercion, and grooming (Branch, Rosick, Johnson, & Solano, 2017). For instance, in longitudinal research conducted with 1320 students in Massachusetts, over the years, large numbers of students reported that sexually explicit pictures had been released without their consent after relationships had ended (Englander & McCoy, 2017). Victims of pornographic revenge activity were predominantly teen girls who sent sexual pictures, because of pressure from a guy. The majority of private photos were forwarded and sent by an ex-boyfriend.

Technology has increased the risk for children to become victims of adults. In recent years, child trafficking has become increasingly widespread (United Nations Office on Drugs and Crime; UNODC, 2014). A lot of children are used for prostitution,

pornography, and sexual tourism (Miller-Perril & Wurtele, 2016). In two focus group studies, Groenestein, Baas, Van Deursen, and De Jong (2016) investigated the capacity of teen girls to assess if an online stranger is an adult or a peer. Their findings suggest that only 43% were able to assess correctly this difference. The problem seems to be that teen girls ignore completely personal questions, and the exaggerated interest in sexual things.

To combat some of the technology-related risks for adolescents, researchers suggest that teens focus greater awareness on their use of and engagement with technology, as well as pay more attention to the monitoring and safety suggestions from teachers at school and parents at home (van den Eijnden, Meerkerk, Vermulst, Spijkerman, & Engels, 2008). It is fundamental that teens are given and develop greater coping strategies to protect them from such offenses. Such strategies may include changing passwords or identity profiles on social networks with relative frequency, not posting personal photos, and having privacy settings be secured and anonymous on social networking services (SNSs) like Facebook and other like platforms.

### **Clinical implications**

From this review of the literature, it is evident that there is a need to assess the use of and engagement with social media and social networking practices when conducting a sexual clinical assessment of adolescent clients. Specialists engaged in working with teenagers need to be guided by specific guidelines and receive specialized training to increase knowledge and skills in this area. In short, what clinicians need to understand is that the use of technology by adolescents is mostly not harmful, and it is an important aspect of their identity development, as well as the development of their relationships and sexuality. Of course, clinicians also need to understand and ask questions assessing the uncritical and unconditioned use and abuse of technology, which if left unchecked can lead to risky behaviors. Some specific instruments may help clinicians to distinguish between what is positive use and what may be risky use (see Eleuteri, Tripodi, Petrucci, Rossi, & Simionelli, 2014).

When conducting this assessment, a positive approach, and one of acceptance around participation with technology, should be adopted by the clinical provider in order to foster, promote, and encourage safer use of such mediums by adolescents. If a harsh approach, of condemning technological engagement, is adopted, this will likely be met with resistance by adolescent clients. Indeed, in adopting a positive and accepting stance, clinical providers will be able to achieve the goal of supporting youth in their well-being in online and offline environments while also assisting them in ensuring greater privacy, as well as increasing their online knowledge and curiosity, and ultimately leading to safer and more helpful online practices that facilitate an affirming sexual identity (Simon & Daneback, 2013).

### **Conclusion**

Adolescents are now developing their identities and relationships, including those of a sexual nature, at least in part, in online contexts, particularly via SNSs. As a mechanism for identity and relational development, these online environments present both benefits and risks to youth development. Thus, it is essential for clinical providers working with



adolescents and families with adolescents to offer support for the positives that youth experience via technology while also working with them to develop preventative and coping strategies to address the risks they may encounter in online environments.

## Notes

1. It is important to note that there is a movement in the fields of family and sex therapy to frame some forms of addiction as “out of control behaviors” (for more details, see Braun-Harvey & Vigorito, 2015).
2. A form of severe social withdrawal frequently described in Japan, and characterized by adolescents and young adults who become recluses in their parents’ homes, unable to work or go to school for months or years (for more details, see Teo & Gaw, 2010).
3. Selfies are like self-portraits, but without a lag in sharing, and instead with immediacy in sharing via being posted online or sent via text message.
4. Sexting can be defined as the practice of sending and receiving explicit text and/or photos via cellphone.

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## Notes on contributors

*Stefano Eleuteri*, PsyD, is a research fellow at the Department of Psychology, Sapienza University of Rome, Rome, Italy.

*Valeria Saladino*, PsyD, is a graduate student at the Department of Humanities, Social, and Health, University of Cassino and Southern Lazio, Cassino, Italy.

*Valeria Verrastro*, PsyD, is a researcher at the Department of Humanities, Social, and Health, University of Cassino and Southern Lazio, Cassino, Italy.

## ORCID

*Stefano Eleuteri*  <http://orcid.org/0000-0002-8416-2845>

## References

- Allen, S. N. (2015). *Adolescents, social media, and the use of self-portraiture in identity formation* (LMU/LLS theses and dissertations 150). Retrieved from <http://digitalcommons.lmu.edu/etd/150>.

- Ballester-Arnal, R., Giménez-García, C., Gil-Llario, M. C., & Castro-Calvo, J. (2016). Cybersex in the “Net generation”: Online sexual activities among Spanish adolescents. *Computers in Human Behavior*, *57*, 261–266. doi:10.1016/j.chb.2015.12.036
- Barry, C. T., Doucette, H., Loflin, D. C., Rivera-Hudson, N., & Herrington, L. L. (2017). “Let me take a selfie”: Associations between self-photography, narcissism, and self-esteem. *Psychology of Popular Media Culture*, *6*(1), 48–60. doi:10.1037/ppm0000089
- Baumgartner, S. E., Valkenburg, P. M., & Peter, J. (2010). Unwanted online sexual solicitation and risky sexual online behavior across the lifespan. *Journal of Applied Developmental Psychology*, *31*, 439–447. doi:10.1016/j.appdev.2010.07.005
- Branch, K., Rosick, C. M. H., Johnson, E., & Solano, J. (2017). Revenge porn victimization of college students in the United States: An exploratory analysis. *International Journal of Cyber Criminology*, *11*(1), 128–142. doi:10.5281/zenodo.495777
- Braun-Courville, D. K., & Rojas, M. (2009). Exposure to sexually explicit web sites and adolescent sexual attitudes and behaviors. *Journal of Adolescent Health*, *45*, 156–162. doi:10.1016/j.jadohealth.2008.12.004
- Braun-Harvey, D., & Vigorito, M. A. (2015). *Treating out of control sexual behavior: Rethinking sexual addiction*. New York, NY: Springer.
- Brown, T. T., Lugar, H. M., Coalson, R. S., Miezin, F. M., Petersen, S. E., & Schlaggar, B. L. (2005). Developmental changes in human cerebral functional organization for word generation. *Cerebral Cortex*, *15*(3), 275–290. doi:10.1093/cercor/bhh129.
- Bushman, B. J., & Cantor, J. (2003). Media ratings for violence and sex: Implications for policy-makers and parents. *American Psychologist*, *58*(2), 130–141. doi:10.1037/0003-066X.58.2.130.
- Catharine, L. (2016). Sex, love and adolescence in the digital age. *Independence*, *41*(1), 74–75. Retrieved from <https://researchers.mq.edu.au/en/publications/sex-love-and-adolescence-in-the-digital-age>
- De Luca, M. (2017). Hikikomori: Cultural idiom or present-day expression of the distress engendered by the transition from adolescence to adulthood. *L'Évolution Psychiatrique*, *82*(1), 1–15. doi:10.1016/j.evopsy.2016.11.005
- Dir, A. (2017). Effects of sexting on perceptions of sexual intent, sexual consent, and responsibility in sexual encounters. Retrieved from <http://hdl.handle.net/1805/12329>
- Durston, S., Davidson, M. C., Tottenham, N., Galvan, A., Spicer, J., Fossella, J. A., & Casey, B. J. (2006). A shift from diffuse to focal cortical activity with development. *Development Science*, *9*(1), 1–8. doi:10.1111/j.1467-7687.2005.00454.x
- Eaton, D. K., Kann, L., Kinchen, S., Ross, J., Hawkins, J., Harris, W. A., ... Wechsler, H. (2006). Youth risk behavior surveillance – United States. *Journal of School Health*, *76*(7), 353–372. doi:10.1111/j.1746-1561.2006.00127.x
- Eleuteri, S., Tripodi, F., Petrucci, I., Rossi, R., & Simonelli, C. (2014). Questionnaires and scales for the evaluation of the online sexual activities: A review of 20 years of research. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *8*(1), Article 2. doi:10.5817/CP2014-1-2
- Englander, K. E., & McCoy, M. (2017). Pressured sexting and revenge porn in a sample of Massachusetts adolescents. *International Journal of Technoethics*, *8*(2), 10. doi:10.4018/IJT.2017070102
- Erikson, E. H. (1968). *Identity, youth and crisis*. New York, NY: Norton.
- Franks, M. A. (2016). Drafting an effective “revenge porn” law: A guide for legislators. Retrieved from <https://www.cybercivilrights.org/guide-to-legislation/>
- Freeman-Longo, R. E. (2000). Children, teens, and sex on the Internet. *Sexual Addiction & Compulsivity*, *7*, 75–90. doi:10.1080/10720160008400208
- Gravningen, K., Aicken, C. R. H., Schirmer, H., & Mercer, C. H. (2016). Meeting sexual partners online: Associated sexual behaviour and prevalent chlamydia infection among adolescents in Norway: A cross-sectional study. *Sexually Transmitted Infections*, *92*(2), 91–96. doi:10.1136/sextrans-2014-051927
- Griffiths, M. (2000). Does Internet and computer “addiction” exist? Some case study evidence. *CyberPsychology and Behavior*, *3*(2), 211–218. doi:10.1089/109493100316067
- Griffiths, M. D. (2012). Facebook addiction: Concerns, criticisms and recommendations. *Psychological Reports*, *110*(2), 518–520. doi:10.2466/01.07.18.PR0.110.2.518-520

- Groenestein, E., Baas, N., Van Deursen, A. J. A. M., & De Jong, M. D. T. (2016). Strategies and cues adolescents use to assess the age of an online stranger. *Information, Communication & Society*, 20, 1–18. doi:10.1080/1369118X.2017.1309443
- Gross, M. (2017). Cyber sexual bullying, “sexting” in schools, and the growing need to educate the youth. *The University of the Pacific Law Review*, 48(3), 555–574. Retrieved from [http://www.mcgeorge.edu/Documents/Publications/grossEducation\\_TUOPLR483.pdf](http://www.mcgeorge.edu/Documents/Publications/grossEducation_TUOPLR483.pdf)
- Halpern-Felsher, B., Baker, M., & Stitzel, S. (2016). Decision-making in adolescents and young adults. In M. Diefenbach, S. Miller-Halegoua, & D. Bowen (Eds.), *Handbook of health decision science* (pp. 157–167). New York, NY: Springer.
- Hertlein, K. M., & Blumer, M. L. C. (2013). *The couple and family technology framework: Intimate relationships in a digital age*. New York, NY: Routledge.
- Husu, H. M., & Välimäki, V. (2017). Staying inside: Social withdrawal of the young, Finnish ‘Hiki-komori’. *Journal of Youth Studies*, 20(5), 605–621. doi:10.108/13676261.2016.1254167
- Khan, S., Gagné, M., Yang, L., & Shapka, J. (2016). Exploring the relationship between adolescents’ self-concept and their offline and online social worlds. *Computers in Human Behavior*, 55(B), 940–945. doi:10.1016/j.chb.2015.09.046
- Knop, K., Öncü, J. S., Penzel, J., Abele, T. S., Brunner, T., Vorderer, P., & Wessler, H. (2016). Offline time is quality time: Comparing within-group self-disclosure in mobile messaging applications and face-to-face interactions. *Computers in Human Behavior*, 55(B), 1076–1084. doi:10.1016/j.chb.2015.11.004
- Kroger, J. (2000). *Identity development: Adolescence through adulthood*. Newbury Park, CA: Sage.
- Lengacher, L. (2015). Mobile technology: Its effect on face-to-face communication and interpersonal interaction. *Undergraduate Research Journal for the Human Sciences*, 14. Retrieved from <http://www.kon.org/urc/v14/lengacher.html>
- Lenhart, A. (2015). *Teens, social media and technology overview 2015*. Retrieved from <http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015/>
- Li, S., Hietajarvi, L., Palonen, T., Salmela-Aro, K., & Hakkarainen, K. (2017). Adolescents’ social networks: Exploring different patterns of socio-digital participation. *Scandinavian Journal of Educational Research*, 61(3), 255–274. doi:10.1080/00313831.2015.1120236
- Livingstone, S., Bober, M., & Helsper, E. J. (2005). Active participation or just more information? Young people’s take up of opportunities to act and interact on the Internet. *Information, Communication and Society*, 8(3), 287–314. doi:10.1080/13691180500259103
- Lloyd, B. (2002). A conceptual framework for examining adolescent identity, media influence, and social development. *Review of General Psychology*, 6(1), 73–91. doi:10.1037/1089-2680.6.1.73
- Medrano, J. L. J., Rosales, F. L., & Gámez-Guadix, M. (2017). Assessing the links of sexting, cyber-victimization, depression, and suicidal ideation among university students. *Archives of Suicide Research*, 21(2), 1–12. doi:10.1080/13811118.2017.1304304
- Menting, B., Van Lier, P. A., Koot, H. M., Pardini, D., & Loeber, R. (2016). Cognitive impulsivity and the development of delinquency from late childhood to early adulthood: Moderating effects of parenting behavior and peer relationships. *Development and Psychopathology*, 28(1), 167–183. doi:10.1017/S095457941500036X
- Miller-Perril, C., & Wurtele, S. C. (2016). Sex trafficking and the commercial sexual exploitation of children. *Women & Therapy*, 40(1–2), 123–151. doi:10.1080/02703149.2016.1210963
- Monk, C. S., McClure, E. B., Nelson, E. E., Zarahn, E., Bilder, R. M., Leibenluft, E., ... Pine, D. S. (2003). Adolescent immaturity in attention-related brain engagement to emotional facial expressions. *NeuroImage*, 20(1), 420–428. PMID:14527602.
- Munno, D., Cappellin, F., Saroldi, M., Bechon, E., Guglielmucci, F., Passera, R., ... Zullo, G. (2017). Internet addiction disorder: Personality characteristics and risk of pathological overuse in adolescents. *Psychiatry Research*, 248, 1–5. doi:10.1016/j.psychres.2016.11.008
- Ramirez, A. Jr., & Wang, Z. (2008). When online meets offline: An expectancy violations theory perspective on modality switching. *Journal of Communication*, 58, 20–39. doi:10.1111/j.1460-2466.2007.00372.x

- Rubia, K., Overmeyer, S., Taylor, E., Brammer, M., Williams, S. C., Simmons, A., ... Bullmore, E. T. (2000). Functional frontalisation with age: Mapping neurodevelopmental trajectories with fMRI. *Neuroscience & Biobehavioral Review*, 24(1), 13–19. PMID:10654655.
- Rubia, K., Smith, A. B., Woolley, J., Nosarti, C., Heyman, I., Taylor, E., & Brammer, M. (2006). Progressive increase of frontostriatal brain activation from childhood to adulthood during event-related tasks of cognitive control. *Human Brain Mapping*, 27(12), 973–993. doi:10.1002/hbm.20237
- Russell, B. S., Heller, A. T., & Hutchison, M. (2017). Differences in adolescent emotion regulation and impulsivity: A group comparison study of school-based recovery students. *Substance Use & Misuse*, 52(8), 1085–1097. doi:10.1080/10826084.2016.1272612
- Sadowski, M. (2008). *Adolescents at school: Perspectives on youth, identity, and education* (2nd ed.). Cambridge, MA: Harvard Education Press.
- Salmela-Aro, K., Upadyaya, K., Hakkarainen, K., & Lonka, K. (2016). The dark side of Internet use: Two longitudinal studies of excessive Internet use, depressive symptoms, school burnout and engagement among Finnish early and late adolescents. *Journal of Youth and Adolescence*, 46(2), 343–357. doi:10.1007/s10964-016-0494-2
- Sheldon, P. (2013). Voices that cannot be heard: Can shyness explain how we communicate on Facebook versus face-to-face. *Computers in Human Behavior*, 29, 1402–1407. doi:10.1016/j.chb.2013.01.016
- Shifflet-Chila, E. D., Harold, R. D., Fitton, V. A., & Ahmedani, B. K. (2016). Adolescent and family development: Autonomy and identity in the digital age. *Children and Youth Services Review*, 70, 364–368. doi:10.1016/j.childyouth.2016.10.005
- Simon, L., & Daneback, K. (2013). Adolescents' use of the Internet for sex education: A thematic and critical review of the literature. *International Journal of Sexual Health*, 25(4), 305–319. doi:10.1080/19317611.2013.823899
- Steinberg, E. R. (1989). Cognition and learner control: A literature review, 1977-1988. *Journal of Computer-Based Instruction*, 16, 117–121. Retrieved from <http://dl.acm.org/citation.cfm?id=70832&preflayout=tabs>
- Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review*, 28(1), 78–106. doi:10.1016/j.dr.2007.08.002
- Strassberg, D. S., McKinnon, R. K., Sustaita, M. A., & Rullo, J. (2013). Sexting by high school students: An exploratory and descriptive study. *Archives of Sexual Behavior*, 42(1), 15–21. doi:10.1007/s10508-012-9969-8
- Tamm, L., Menon, V., & Reiss, A. L. (2002). Maturation of brain function associated with response inhibition. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41(10), 1231–1238. doi:10.1097/01.CHI.0000020272.43550.5E
- Tang, Y., & Hew, K. F. (2017). Is mobile instant messaging (MIM) useful in education? Examining its technological, pedagogical, and social affordances. *Educational Research Review*, 21, 85–104. doi:10.1016/j.edurev.2017.05.001
- Teo, A. R., & Gaw, A. C. (2010). “Hikikomori” A Japanese culture-bound syndrome of social withdrawal? A proposal for DSM-V. *The Journal of Mental and Nervous Disease*, 198(6): 444–449. doi:10.1097/NMD.0b013e3181e086b1
- Tripodi, F., Eleuteri, S., Giuliani, M., Rossi, R., Livi, S., Petruccioli, I., & Simonelli, C. (2015). Unusual online sexual interests in heterosexual Swedish and Italian university students. *Sexologies*, 24(4), e84–e93. doi:10.1016/j.sexol.2015.03.003
- United Nations Office on Drugs and Crime. (2014). *Global report on trafficking in persons* (United Nations publication, Sales No. E.14.V.10). Retrieved from [http://www.unodc.org/documents/data-and-analysis/glotip/GLOTIP\\_2014\\_full\\_report.pdf](http://www.unodc.org/documents/data-and-analysis/glotip/GLOTIP_2014_full_report.pdf)
- Valenzuela, S., Bachmann, I., & Aguilar, M. (2016). How family communication, information-processing needs, and gratifications determine adolescents' exposure to news. *Communication Research*. Advance online publication. doi:10.1177/0093650215623833
- Peter, J., & Valkenburg, P. M. (2008). Adolescents' identity experiments on the Internet: Consequences for social competence and self-concept unity. *Communication Research*, 35(2), 208. doi:10.1177/0093650207313164

- van den Eijnden, R. J. J. M., Meerkerk, G. J., Vermulst, A. A., Spijkerman, R., & Engels, R. C. M. E. (2008). Online communication, compulsive Internet use, and psychosocial well-being among adolescents: A longitudinal study. *Developmental Psychology, 44*(3), 655–665. doi: 10.1037/0012-1649.44.3.655
- Vinti H. D. B., Wheldon, C., McFarlane, M., Brogan, N., & Walsh-Buhi, E. R. (2016). Assessing relationship and sexual satisfaction in adolescent relationships formed online and offline. *Journal of Adolescent Health, 58*(1), 11–16. doi:10.1016/j.jadohealth.2015.09.027
- Woods, H. C., & Scott, H. (2016). Sleepy teens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence, 51*, 41–49. doi:10.1016/j.adolescence.2016.05.008
- Young, R., Subramanian, R., Miles, S., Hinnant, A., & Andsager, J. A. (2016). Social representation of cyberbullying and adolescent suicide: A mixed-method analysis of news stories. *Health Communication, 32*(9), 1–11. doi:10.1080/10410236.2016.1214214
- Yurgelun-Todd, D. (2007). Emotional and cognitive changes during adolescence. *Current Opinion in Neurobiology, 17*(2), 251–257. doi:10.1016/j.conb.2007.03.00
- Zilberstein, K. (2013). Technology, Relationships and Culture: Clinical and Theoretical Implications. *Clinical Social Work Journal, 41*(3), 223–308. doi:10.1007/s10615-013-0461-2