

Influences of social media on sexual behavior in adolescents

Associations between excessive use and risky sexual behavior

Contemporary research underscores the pivotal nexus between adolescent development, media influence, and self-esteem, underlining its profound implications for global health paradigms. Here we focus on recent studies which highlight associations to risky sexual behavior. On the other hand we point out education from professional web-sides.

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According to the World Health Organization, adolescents represent one-sixth of the global population (1). Adolescent development encompasses various aspects, including self-esteem and sexual behavior, which are crucial for overall well-being and health outcomes (2). One significant influence on these aspects is media exposure, which has been extensively studied due to its potential impact on adolescent perceptions and behaviors (3).

With the widespread adoption of smartphones and easy access to the internet making digital communication an integral part of their daily routines. Qualitative research conducted with young people in Australia, the UK, and North America, suggests that adolescents utilize social media platforms to negotiate aspects of sexuality and gender identity, demonstrating diverse behaviors ranging from humor and flirtation to intimacy or aggression (4). Excessive technology use, including frequent texting and prolonged periods on social media platforms, has been linked to unhealthy behaviors and poorer perceived health among adolescents (5).

Increase of risky sexual behaviors

Exposure to sexual content has been associated with heightened sexual activity, earlier sexual initiation, unprotected intercourse, or involvement in activities with multiple partners leading to increased rates of unplanned pregnancies and rise in incidence of sexually transmitted infections (STIs) among adolescents (6–8).

The proliferation of dating apps has further revolutionized adolescent relationships, facilitating connections based on location and preferences. Studies have identified dating app usage as a significant risk factor for engaging in risky sexual behaviors, with the likelihood of condomless sex increasing among individuals seeking partners online (9) while also increasing the risks of online unwanted sexual solicitations, including exploitation by predators (10). Concurrently, sexting has emerged as a prevalent means of sexual exploration among adolescents, coinciding with increased internet usage. However, adolescents who engage in sexting for social validation are susceptible to experiencing negative psychological effects, alongside potential victimization from sexual coercion, cyberbullying, and harassment (11).

In addition, negative media representations, perpetuated by many films, often reinforce harmful gender stereotypes, normalize non-consensual behavior, and depict violence during sexual encounters. Prolonged exposure to such content can influence adolescents' perceptions of reality and contribute to the internalization of these stereotypes effecting adolescents' sexual decision-making process (12).

Association between self-esteem and sexual behavior

Media portrayals often present idealized images of beauty, success, and social acceptance, which can create unrealistic standards for adolescents (13). This phenomenon contributes to diminished self-esteem,

At a glance

- **Adolescents, constituting one-sixth of the global population**, undergo multifaceted developmental stages crucial for their well-being, encompassing self-esteem and sexual behavior influenced significantly by media exposure.
- **Negative media representations perpetuate** harmful stereotypes, affecting adolescents' sexual decision-making processes and contributing to increased rates of unplanned pregnancies and sexually transmitted infections.
- **Social media and web-based interventions** may also have a positive impact on sexual health, by promoting healthy habits, teaching about sexual health, and providing anonymous support for marginalized or victimized individuals.
- **Efforts integrating web-based interventions with traditional sexual education methods** are vital to empower adolescents with accurate information, especially for marginalized groups, while promoting positive self-esteem and comprehensive sexual education to mitigate the adverse effects of media on adolescent well-being.

particularly regarding body image dissatisfaction and feelings of inadequacy and idealized selves contribute to heightened vulnerability to psychosocial issues such as depression, anxiety, and disordered eating behaviors (14). Social media platforms exacerbate these effects by facilitating constant comparison with peers' curated online personas, intensifying adolescents' dissatisfaction with their own self-perceptions (15).

Recent studies have highlighted the association between low self-esteem and increased engagement in risky sexual behaviors among adolescents (2). Low self-esteem may be associated with a lack of assertiveness in sexual decision-making, making individuals more prone to engaging in unprotected sex or other risky behaviors (16).

Early sexual debut has been positively associated with low self-esteem, while condom use has been linked to higher self-esteem among adolescents (17). Adolescent girls with low self-esteem may be particularly vulnerable to peer pressure and may seek validation through risky sexual behaviors. However, the relationship between self-esteem and risky sexual behaviors is multifaceted and influenced by various individual and contextual factors (18).

Marginalized adolescents, including those from lower socioeconomic status or diverse backgrounds, are disproportionately affected by media representations, exacerbating existing disparities in self-esteem and sexuality (19). Limited representation and stereotypical portrayals in mainstream media further compound feelings of exclusion and marginalization among these groups (20).

Positive aspects of social media on sexual health

In contrast with the above, the use of social media may also be associated with many positive aspects in terms of sexual health in adolescents.

There is growing evidence that social media can be an effective tool to teach adolescents about sexual health and promote healthy habits. Data support an increase in knowledge about sexual health associated with web-based interventions, although evidence regarding a subsequent change in behaviors (eg. condom and contraception use, STIs screening) is weaker (21–26).

Web-based interventions for complementing sexual education

«*Sciences, Sexes, Identités*» (SSI, www.unige.ch/ssi) is a scientific and educational program developed at the University of Geneva (Faculty of medicine UNIGE, HUG; Santé sexuelle Suisse, Geneva State education dpt), whose mission is sexual health promotion and gender equity by generating courses and pedagogical tools for a positive sex education among children

and adolescents. The program includes in-person and online courses for teachers, sex-educators and/or parents to generate a favorable environment for sexual health promotion. It provides education and health professionals with tools to use with their student/patients: videos available on free internet platforms on genital anatomy, sexual physiology, gender identity and sexual orientation (subtitled in 8 languages) as well as illustrated booklets, and 3D kits of the female and male genital organs (27).

«The Bioscope», Geneva University biology's outreach lab, offers middle and secondary school classes, in the context of SSI, a 2h interactive scientific workshop on biological sex development, intersex conditions and related psychosocial issues.

We argue that web-based interventions should complement sexual education provided by the parents, school, and healthcare providers. It must be kept in mind that possibility to discuss sexual health for adolescents in their family is highly variable, depending on social factors, parental education, cultural background, and individual specificities. Despite encouragement to gradually introduce sexual education from childhood, in a manner that is suitable to the child's development (28), many parents hesitate to engage in discussions about sexual health with their children. This reluctance might stem from fears of inadvertently encouraging sexual activity (contrary to evidence [29]) or because of discomfort and lack of knowledge (28).

The role of health care providers and reliable online platforms

For those adolescents who do not have access to sexual health information at home, internet and social media may be the easiest way to apprehend sexual health. Adolescents need help navigating these sources of information, to identify reliable resources and remain critical about information provided that may be inaccurate. Healthcare providers should be able to guide their patients to reliable online resources which have been listed by authors (28) and local institutions (30, 31).

The anonymous use of websites or platforms may also facilitate healthcare access to marginalized individuals (such as the LGBTQ+ community). This may provide them with support from an online community who shares similar characteristics, including gender identity, sexual orientation, or chronic health conditions (32).

In addition, new technologies do offer a unique opportunity to change norms which are usually depicted in traditional media. For example, the «labia library» initiative aims at showing the diversity of female genital organs which can empower individuals and make them reconsider the concept of «normality» (33). This could also serve as a useful resource during

medical consultation, especially with the growing number of requests for genital surgery, in particular labiaplasty, based on the standard labia depicted in porn films.

Interestingly, social media has also been a «safe space» enabling victims to disclose sexual violence, often after years of silence. Embodied by the «Me-Too» movement, this phenomenon highlights barriers to sexual assaults disclosure among families, social groups, and questions the ability of healthcare providers to explore violence in their patients (34).

Conclusion

Understanding the complex interplay between media influence, self-esteem, and adolescent sexuality is crucial for promoting positive youth development and addressing health disparities. Comprehensive approaches that encompass media literacy education and regulatory policies are necessary to mitigate the adverse effects of media on adolescent well-being. Efforts to promote positive self-esteem and provide comprehensive sexual education are essential for addressing risky sexual behaviors in adolescents and fostering healthy development in this population. ■

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References:

1. <https://www.who.int/news-room/questions-and-answers/item/adolescent-health-and-development>. World Health Organization (WHO). (2020). Adolescent development.
2. Kotiuga J, Yampolsky MA, Martin GM.: Adolescents' perception of their sexual self, relational capacities, attitudes towards sexual pleasure and sexual practices: a descriptive analysis. *J Youth Adolesc.* 2022 Mar;51(3):486–498.
3. Valkenburg PM, Peter J.: The Differential Susceptibility to Media Effects Model: Differential Susceptibility to Media Effects Model. *J Commun.* 2013 Apr;63(2):221–243.
4. Lim MSC, Cooper S, Lewis L, Albury K, Chung KSK, Bateson D, et al.: Prospective mixed methods study of online and offline social networks and the development of sexual agency in adolescence: the Social Networks and Agency Project (SNAP) protocol. *BMJ Open.* 2019 May 19;9(5):e024329.
5. Landry M, Turner M, Vyas A, Wood S.: Social media and sexual behavior among adolescents: Is there a link? *JMIR Public Health Surveill.* 2017 May 19;3(2):e28.
6. Bleakley A, Ellithorpe ME, Hennessy M.: Understanding the nature of media effects from onscreen exposure to alcohol, sex, and their combination. *J Adolesc Health.* 2019 Jul;65(1):51–56.
7. Frentzen E, Reischer D, Brähler E, Rassenhofer M, Fegert JM, Witt A.: The Predictors of Awareness of Sexual Abuse and Sexual Violence in the Media and the Influence on Actions of the Individuals. *Front Psychiatry.* 2021;12:789144.
8. Sewak A, Yousef M, Deshpande S, Seydel T, Hashemi N.: The effectiveness of digital sexual health interventions for young adults: a systematic literature review (2010-2020). *Health Promot Int.* 2023 Feb 1;38(1):daac104.
9. Anderson LE, Dingle GA, O'Gorman B, Gullo MJ.: Young adults' sexual health in the digital age: Perspectives of care providers. *Sex Reprod Healthc.* 2020 Oct;25:100534.

10. Purba AK, Thomson RM, Henery PM, Pearce A, Henderson M, Katikireddi SV.: Social media use and health risk behaviours in young people: systematic review and meta-analysis. *BMJ.* 2023 Nov 29;383:e073552.
11. Verrastro V, Saladino V, Eleuteri S, Barberis N, Cuzzocrea F.: Sexting, Self-esteem, and Social Media: A Comparison among Frequent, Occasional, and Non-sexting Italian Adolescent Girls. *Psychol Russ.* 2023;16(4):3–20.
12. Kulkarni SJ, Porter AM, Mennick A, Gil-Rivas V.: "I feel like... their relationship is based on the media": Relationship Between Media Representation and Adolescents' Relationship Knowledge and Expectations. *J Prim Prev.* 2019 Oct;40(5):545–560.
13. Grabe S, Ward LM, Hyde JS.: The role of the media in body image concerns among women: a meta-analysis of experimental and correlational studies. *Psychol Bull.* 2008 May;134(3):460–476.
14. Tiggemann M, Slater A.: NetGirls: the Internet, Facebook, and body image concern in adolescent girls. *Int J Eat Disord.* 2013 Sep;46(6):630–633.
15. Perloff RM.: Social Media Effects on Young Women's Body Image Concerns: Theoretical Perspectives and an Agenda for Research. *Sex Roles.* 2014 Dec;71(11–12):363–377.
16. McArdle P, Wiegiersma A, Gilvarry E, Kolte B, McCarthy S, Fitzgerald M, et al.: European adolescent substance use: the roles of family structure, function and gender. *Addiction.* 2002 Mar;97(3):329–336.
17. Bleakley A, Hennessy M, Fishbein M, Jordan A.: It Works Both Ways: The Relationship between Exposure to Sexual Content in the Media and Adolescent Sexual Behavior. *Media Psychol.* 2008 Oct 1;11(4):443–461.
18. Brown JD, L'Engle KL.: X-Rated: Sexual Attitudes and Behaviors Associated With U.S. Early Adolescents' Exposure to Sexually Explicit Media. *Communication Research.* 2009 Feb;36(1):129–151.
19. Brennan T. (Review: Rosalind Gill): Gender and the Media. Cambridge: Polity Press 2007. *Feminism & Psychology.* 2007 Aug;17(3):410–415.
20. Diamond LM, Butterworth M.: Questioning Gender and Sexual Identity: Dynamic Links Over Time. *Sex Roles.* 2008 Sep;59(5–6):365–376.
21. Martin P, Cousin L, Gottot S, Bourmaud A, de La Rochebrochard E, Alberti C.: Participatory Interventions for Sexual Health Promotion for Adolescents and Young Adults on the Internet: Systematic Review. *J Med Internet Res.* 2020 Jul 31;22(7):e15378.
22. Jones K, Eathington P, Baldwin K, Sipsma H.: The impact of health education transmitted via social media or text messaging on adolescent and young adult risky sexual behavior: a systematic review of the literature. *Sex Transm Dis.* 2014 Jul;41(7):413–419.
23. Wadham E, Green C, Debattista J, Somerset S, Sav A.: New digital media interventions for sexual health promotion among young people: a systematic review. *Sex Health.* 2019 Apr;16(2):101–123.
24. Saha R, Paul P, Yaya S, Banke-Thomas A.: Association between exposure to social media and knowledge of sexual and reproductive health among adolescent girls: evidence from the UDAYA survey in Bihar and Uttar Pradesh, India. *Reprod Health.* 2022 Aug 17;19(1):178.
25. Hieftje K, Edelman EJ, Camenga DR, Fiellin LE.: Electronic media-based health interventions promoting behavior change in youth: a systematic review. *JAMA Pediatr.* 2013 Jun;167(6):574–580.
26. Hall KS, Westhoff CL, Castaño PM.: The impact of an educational text message intervention on young urban women's knowledge of oral contraception. *Contraception.* 2013 Apr;87(4):449–454.
27. Abdulcadir J, Dewaele R, Firmenich N, Remuina J, Petignat P, Botsikas D, et al.: In Vivo Imaging-Based 3-Dimensional Pelvic Prototype Models to Improve Education Regarding Sexual Anatomy and Physiology. *The Journal of Sexual Medicine.* 2020 Sep;17(9):1590–1602.
28. Yaron M, Soroken C, Narring F, Brockmann C, Merglen A.: Adolescence and sexuality: a risky business. How best to inform parents??. *Rev Med Suisse.* 2018 Apr 18;14(603):843–848.
29. Karofsky PS, Zeng L, Kosorok MR.: Relationship between adolescent-parental communication and initiation of first intercourse by adolescents. *J Adolesc Health.* 2001 Jan;28(1):41–45.
30. <https://www.hug.ch/sante-sexuelle-et-planning-familial/documentation-sexualite>.
31. <https://www.fr.ch/sante/prevention-et-promotion/sites-internet-en-lien-avec-la-sante-sexuelle>.
32. O'Keeffe GS, Clarke-Pearson K.: Council on Communications and Media. The impact of social media on children, adolescents, and families. *Pediatrics.* 2011 Apr;127(4):800–804.
33. <https://www.labialibrary.org.au/>.
34. Alaggia R, Wang S.: "I never told anyone until the #metoo movement": What can we learn from sexual abuse and sexual assault disclosures made through social media? *Child Abuse Negl.* 2020 May;103:104312.