# Challenges of internet and social media use in adolescents

Mandakini Sadhir, MD; Stephanie J Stockburger, MD; and Hatim A Omar, MD Division of Adolescent Medicine, Department of Pediatrics, University of Kentucky, Lexington, Kentucky, United States

*Correspondence:* Professor Hatim, e-mail: <a href="mailto:haomar2@uky.edu">haomar2@uky.edu</a> Received: 25/2/2016; Revised: 8/3/2016; Accepted: 10/3/2016

**Abstract**: There has been tremendous growth in use of technology in recent decades. The majority of teens now have access to a desktop/laptop computer as well as a gaming console and smartphone. With growing internet and social media use teens now face challenges including cyberbullying, sexting and problematic internet use that result in various health implications. Health care providers are in unique position to educate adolescents and families about current challenges and provide age appropriate guidance to promote healthy internet behaviors.

### Introduction

The current generation of children and adolescents are digital natives<sup>1</sup> as they are exposed to technological tools in their upbringing. The majority of teens now have access to a desktop/laptop computer as well as a gaming console and smartphone. According to a national survey<sup>2</sup>, almost 92% teens report going online daily, of these 24% go online "almost constantly" and 56% go online several times a day. Only 12% reported going online once a day and 6% reported going online weekly. Smartphones have now become the primary driver of teen internet use<sup>2</sup>. The majority of teens with a smartphone or other such devices go online daily or more often as compared to those who do not have a mobile phone. Texting has become an important mode of communication for teens and is either done through phones or by using app such as Instagram, WhatsApp, snapchat, etc. Girls tend to send more texts than boys which can average more than thirty on a typical day<sup>2</sup>. In addition, social media use such as Facebook, Instagram, and twitter is particularly common among female adolescents. Adolescent males are more likely to own a gaming console and play video games<sup>2</sup>.

Internet has provided a new avenue to enhance personal growth through academic enrichment, creative expression and widespread social interaction<sup>3</sup>. Social media use has become an integral part of adolescent lives. But with its use, teens are currently facing problems of cyberbullying, problematic internet use and sexting which are often associated with various health and legal implications.

### **Cvberbullving**

Cyberbullying is defined as any kind of aggression perpetrated through technology. It includes any type of harassment or bullying that occurs through e-mail, a chat room, instant messaging, a website (including blogs), text messaging, or videos or pictures posted on websites or sent through cell phones<sup>4</sup>. Harassment includes teasing, telling lies, making fun of someone, making rude or mean comments, spreading rumors, or making threatening or aggressive comments<sup>4</sup>. In a recent Youth Risk Behavior Surveillance<sup>5</sup> students were asked if

they were electronically bullied through emails, chat rooms, instant messaging, websites, or texting during the previous twelve months before the survey. Nationwide, 14.8% of high school students reported electronic aggression<sup>5</sup>. Female students had higher prevalence of electronic bullying as compared to males. Ethnic differences were also noted with a higher percentage of Non- Hispanic white students reporting being bullied as compared to Hispanic and Blacks<sup>5</sup>. Across various state surveys, 8<sup>th</sup> and 9<sup>th</sup> grade students were more likely to be bullied as compared to other grades<sup>5</sup>. In another study<sup>6</sup>, when asked about specific types of cyberbullying in the previous 30 days, mean or hurtful comments (12.8%) and spreading rumors online (19.4%) were among the most commonly-cited<sup>6</sup>. Other common methods for electronic aggression were making threats to hurt others and posting mean or hurtful pictures<sup>6</sup>.

Victims are often bullied by known perpetrators but there is significant amount of anonymous electronic aggression<sup>7</sup>. Anonymity can lead to exaggerated aggression as it promotes disinhibition and perpetrator may feel immune to consequences. Victims can feel constantly harassed even if they are offline and globally threatened because they may not know who is behind the attacks and who to protect themselves against. Electronic form of teen dating violence is also a growing concern. Majority of victims who experience face-face dating violence also experience online aggression<sup>8</sup>. Both adolescents males and females have reported experiencing dating violence through threatening cell phone messages or through online sharing or uploading a humiliating picture of them.

Similar to traditional face to face bullying, cyberbullying is associated with mental health concerns. A literature review showed that cyberbullying victims have reported overall high rates of "emotional distress", depression, avoidance, fear, alexithymia, insomnia and other somatic symptoms, such as headaches and abdominal pain. Cyberbullying has been associated with increased likelihood of alcoholic intoxication, misusing prescription and over the counter (OTC) drugs as well as self-harm behaviors. A meta-analysis of published studies of cyberbullying revealed that cyberbullying was strongly related to suicidal ideation as compared to traditional face-face bullying.

Legal ramification for cyberbullying is currently not well defined. Most states have included electronic harassment in their bullying laws and require schools to have anti bullying policies to address the issue<sup>12</sup>. Anonymous bullying is an ongoing challenge for victim, parents and schools.

## **Dating and Sexting**

Social media and digital technology has played an important role in how teens seek out, maintain and end relationships. While the majority of teens with dating experience never dated someone they first met online, 24% of teens have reported to date someone they encountered online<sup>13</sup>. Teens use social media as an integral part of dating. They often show their romantic interest to others by friending on social media site and express their attraction by liking, commenting or otherwise interacting with that person. While teens use both text messaging and talking on the phone, texting is by far the dominant way teens communicate in romantic relationships<sup>13</sup>. In addition to text messaging, teens have been engaging in sexting. It refers to sending sexual images (nude photos) and sometimes sexual texts via cell phone and other electronic devices<sup>14</sup>. A review<sup>15</sup> showed that 10%-15% of teens sent sexually suggestive text or photo and 15%-35% received sexts with sexually suggestive text or photo content<sup>15</sup>. Female adolescents were more likely to send sexts than male adolescents. Sexting was also common among LGBTQ (lesbian, gay, bisexual, transsexual, and questioning)

youth. One of the main motivating factors for sexting was reported to be pressure from boys to send sexts. Furthermore, about one –fourth of teen girls and boys cited pressure from friends, while 66% girls and 60% boys reported that they did it for "fun or being flirtatious". Girls have also reported engaging in sexting as a "sexy present for their boyfriend" Sexting has been found to be associated with higher likelihood of becoming sexually active and engaging in high risk behaviors including unprotected sex and substance use 16, 17.

Sexting has been a relatively newer phenomenon with varied legal implications. In United States, while 20 states currently have "sexting" law, most other states categorize teen sexting as "Child Pornography" and teens who engage in such behaviors face serious potential consequences<sup>18</sup>.

## **Problematic internet use (PIU):**

With increase in use of internet and technology, there has been emerging concern for problematic internet use<sup>19</sup>, also known as internet addiction<sup>20,21</sup>, pathological Internet use<sup>22</sup> and Internet dependence<sup>23</sup>. It is commonly defined as "use of the internet that creates psychological, social, school and /or work difficulties in a person's life". Currently, there are no widely accepted and well established diagnostic criteria. Hence prevalence varies worldwide. Studies have noted prevalence to be 1%-9% in Europe, 1%-12% in the Middle East and 2%-18% in Asian countries<sup>19, 28</sup>. Among 18 studies carried out in the US, 8 studies in college students reported prevalence between 0-26 percent <sup>28</sup>. Many researchers have identified problematic internet use as a separate psychiatric entity with underlying addictive behavior and impulse control disorder<sup>19</sup>. Recently, it was included in DSM V- Section 3 as Internet gaming disorder (needs further evaluation and research)<sup>25</sup>.

Based on various studies worldwide, multiple instruments are used to diagnose internet addiction. Commonly used tests are the Internet Addiction Test and the Chen Internet Addiction Scale. Recently, a newer instrument – Problematic and Risky Internet Use screening Scale (PRIUSS) was designed to diagnose PIU in adolescents and young adults. While initial studies validated its use with good reliability in adolescents, more studies are needed for its use in the general population.

There are various risk factors that may predispose adolescents and young adults to problematic internet use. Engaging in online gaming and social networking sites along with low parental involvement, parental unemployment and urban setting increase the risk for excessive internet use<sup>30,31</sup>. In addition, studies have suggested that problematic internet use is associated with other comorbid condition and psychiatric disorders namely ADHD, depression, problematic gambling, social anxiety and substance use disorders<sup>19,31</sup>. Teenagers with problematic internet use often struggle with academic failures, sleep difficulties, high risk taking behaviors, loneliness and problematic family relationships<sup>31</sup>.

## Promoting Healthy internet and technology use

Pediatric Practitioners are in a unique position to educate adolescent and their families about health internet and social media use. Adolescents often seek care for various health reasons. These clinic encounters serve as an opportunity to discuss about their current internet and social media use. The American Academy of Pediatrics (AAP) <sup>32</sup> recommends asking two media related questions about recreational time spent on playing video games, texting, watching TV or online videos and presence of TV set or other internet connected electronic devices such as computer, iPad, or cell phone in child's bedroom at well child visits and provide media related anticipatory guidance. Parents and families should be counseled to

monitor their teens' media access and use including checking Web sites and other social media apps<sup>30</sup>. They should be encouraged to model active parenting by establishing a family media plan with reasonable and firm rules about cell phones, texting, Internet, and social media use. Enforcing no use of media devices, including cell phones during mealtime and bedtime can be one of the effective strategies<sup>32</sup>.

The AAP has also developed the Healthy Internet use model to address the complexity of social media use in adolescents. While, this model is currently being investigated, it provides a framework for providers to counsel adolescents and their families about having balance, boundaries and communication about social media use<sup>33</sup>. A healthy balance between online and offline activities can minimize risk taking behaviors. Adolescents can be screened for balance in social media use by asking questions about time spent online and how it affects daily activities including school work, sleep, personal and family relationships<sup>33</sup>. It is also important to identify online risk behaviors such as making friends with strangers, not protecting personal information and posting inappropriate pictures or texts<sup>30,33</sup>. Teens, especially younger teens, should be counseled on privacy settings. Older teens may need more guidance and to develop strategies for staying safe online, posting appropriate content and avoid befriending strangers. Pediatricians can encourage open communication between parents and teens about their social media use<sup>33</sup>.

### **Conclusion**

Our current era is marked by widespread technology and internet use. Internet and social media plays an important role in adolescents' lives with many benefits. Given current challenges, it is important for providers to provide guidance to teenagers and encourage families to develop effective strategies to promote healthy internet and social media use.

#### References

- 1. Prensky, M, Digital Natives, Digital Immigrants, On the Horizon MCB University Press, Vol. 9 No. 5, October 2001
- 2. Lenhart, A, Teens, Social Media & Technology Overview 2015, PEW Research Center, Internet, Science and Tech, April 9<sup>th</sup> 2015. Available http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015/
- 3. Moreno MA ed. Sex ,Drugs 'n facebook: A Parent's toolkit for promoting Healthy internet use. Alameda, CA: Hunter House Publisher:2013
- 4. David-Ferdon C., Hertz MF Electronic Media and Youth Violence: A CDC Issue Brief for Researchers. Atlanta (GA): Centers for Disease Control; 2009. Cyberbullying CDC
- 5. Kann, L, Kinchen, S, Shanklin, S et al, Youth Risk behavior surveillance- United States 2013, Morbidity Mortality Weekly Report. Surveillance Summaries / Vol. 63 / No. 4 June 13, 2014 Centers for Disease Control and Prevention. Available http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf
- 6. Hinduja, S, Patchen, J, Cyberbullying Victimization (2015). Cyberbullying Research Center. Accessed- http://cyberbullying.org/2015-data/
- 7. Kowalski RM1, Limber SP, Electronic bullying among middle school students. J Adolesc Health. 2007 Dec;41(6 Suppl 1):S22-30.
- 8. Hinduja, S, Patchen, J, Electronic Dating violence and Teens 2010 Cyberbullying Research Center. Available: http://cyberbullying.org/electronic-dating-violence-and-teens-our-2010-research-findings/

- 9. Aboujaoude E, Savage MW Cyberbullying: Review of an Old Problem Gone Viral. J Adolesc Health. 2015 Jul;57(1):10-8.
- 10. Elgar, FG, Napoletano, A et al, Cyberbullying Victimization and Mental Health in Adolescents and the Moderating Role of Family Dinners, JAMA Pediatr. 2014;168(11):1015-1022. doi:10.1001/jamapediatrics.2014.1223
- 11. Van Geel,M, Vedder, P, Tanilon,J, Relationship Between Peer Victimization, Cyberbullying, and Suicide in Children and Adolescents: A Meta-analysis. JAMA Pediatr. 2014;168(5):435-442.
- 12. Hinduja, S, Patchen, J, The state cyberbullying Laws- January 2016 Cyberbullying Research Center. Available at http://cyberbullying.org/Bullying-and-Cyberbullying-Laws.pdf
- 13. Lenhart, A, Anderson, M, Smith, A Teens, Technology and Romantic Relationships 2015 PEW research center, October 1<sup>st</sup> 2015. Available http://www.pewinternet.org/2015/10/01/teens-technology-and-romantic-relationships/
- 14. Mitchell KJ, Finkelhor D, Jones LM, Wolak J, Prevalence and Characteristics of youth Sexting, a national study, Pediatrics. 2012 Jan;129(1):13-20.
- 15. Sexting prevalence and correlates: a systematic literature review. Klettke B et al; Clin Psychol Rev. 2014 Feb;34(1):44-53. doi: 10.1016/j.cpr.2013.10.007
- 16. Springate, J, Omar, H, The impact of internet on sexual health of adolescentChapter 11, Internet Addiction, A public health concern in Adolescence, pg 133-137
- 17. Houck, Christopher et al, Sexting and Sexual Behavior in At Risk Adolescents, Pediatrics. 2014 Feb;133(2)
- 18. Hinduja, S, Patchen, J State Sexting laws. July 2015 Cyberbullying Research Center. Available: http://cyberbullying.org/state-sexting-laws.pdf
- 19. Spada, M , An overview of Problematic Internet use, Addict Behav. 2014 Jan;39(1):3-6. doi: 10.1016/j.addbeh.2013.09.007.
- 20. Brenner, V. Psychology of computer use XLVII: Parameters of Internet use, abuse and addiction: The first 90 days of the Internet usage survey. Psychological Reports, 80, 879–882.
- 21. Young, K. S. Internet addiction: The emergence of a new clinical disorder. Cyberpsychology & Behavior, 1, 237–244.
- 22. Davis, R. A. (2001). A cognitive—behavioral model of pathological Internet use. Computers in Human Behavior, 17, 187–195.
- 23. Scherer, K. (1997). College life on-line: Healthy and unhealthy Internet use. Journal of College Student Development, 38, 655–664.
- 24. Beard, K. W., & Wolf, E. M. (2001). Modification in the proposed diagnostic criteria for Internet addiction. Cyber psychology & Behavior, 4, 377–383.
- 25. Petry NM, O'Brien CP Internet gaming disorder and the DSM-5, Addiction. 2013 Jul;108(7):1186-7.
- 26. Janikian,M, Tsitsika,A Assessment of Internet Addictive Behavior, Chapter 4-Internet Addiction A public health concern in Adolescence, Nova Science publishers Pg 39-51
- 27. Jelenchick LA, Eickhoff J et al, Screening for Adolescent Problematic Internet Use: Validation of the Problematic and Risky Internet Use Screening Scale (PRIUSS). Acad Pediatr. 2015 Nov-Dec;15(6):658-65. doi: 10.1016/j.acap.2015.07.001.

- 28. Megan A Moreno et al, Problematic Internet Use Among US Youth: A Systematic Review; Arch Pediatr Adolesc Med. 2011 September; 165(9): 797–805
- 29. Chen, S. H., Weng, L. C., Su, Y. J., et al. (2003). Development of Chinese Internet Addiction
  - Scale and its psychometric study. Chinese Journal of Psychology, 45, 279–294.
- 30. Jelenchick, L, Christakis, D; Problematic Internet Use during adolescence and young adulthood, Social Networking and New Technologies, AM: Stars, Adolesc Med 025(2014) 605-620
- 31. Nazeer, A, Greydanus, D, Calles, J Pre-existing and concomitant psychiatric disorders associated with internet addictive behaviors, Chapter 3 Internet Addiction A public Health concern in Adolescence, Nova Science Publisher, pg 25-37
- 32. Strasburger, VC, Hogan, MJ, Children, Adolescents and the Media, Policy Statement, Pediatrics, Nov 2013, 132 (5) 958-961
- 33. Kaseeska, KR, Gorzkowski, J, Adolescent Social Media Use: The role of the pediatric Practitioner and the Healthy Internet use model: Social Networking and New technologies AM:stars, AdolescMed 025(2014) 621-630 pg 621-630