

Digital Technologies and Sex: Internet and Smartphone Influences on Pornography Viewing and Other Sexual Behaviors 

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Abstract and Keywords

The Internet has revolutionized the way in which we consume and participate in sexual activities. Digital technologies are shaping the ways in which people interact with one another romantically and sexually. This chapter reviews some of the ways in which digital technologies are potentially shaping sexual behaviors, especially those of adolescents and young adults. Evidence suggests that technologies are facilitating increasingly more sexual activities among young people and adults, yet our understanding of these remains incomplete. The Internet has made pornography highly accessible to most individuals around the world, but the effects of frequent pornography use on individuals' sexual beliefs and practices remain largely unknown. Sexting is also common among adolescents and adults, with some initial evidence finding that sexting was a partial mediator between problematic alcohol use and sexual hookups. More work on sexting behaviors is needed, particularly among vulnerable populations or groups at risk for exploitation. The wide use of smartphone applications designed to help users find casual sex partners are becoming more common, mirroring the increasing acceptability of having relationally uncommitted sex among young adults. More research is needed to investigate the influences of digital technologies on shaping the sexual practices of adolescents and emerging adults who may be spending increasingly more time online. Furthermore, more research is needed to examine both the potential benefits and risks associated with digital technologies that may facilitate sexual behaviors.

Keywords: Digital technologies, sex, pornography, smartphones, hookups, casual sex

(p. 241) The Internet has revolutionized the way in which people disseminate and use information. In the United States, Internet use rapidly expanded from 14% in 1995 to 87% in 2014 (Fox & Rainie, 2014). The usage of mobile cellular devices has demonstrated a similar pattern. As of 2014, an estimated 90% of American adults own a cell phone, 58% of which have Internet capabilities (Fox & Rainie, 2014). These days, people use the Internet for many purposes, including viewing of pornography (often termed “sexually explicit

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material”). By 2018, 95% of teenagers have access to a smartphone, and 45% reported they are online “almost constantly” (Anderson & Jiang, 2018). Approximately 78% of young adults (aged 18–24) use Snapchat and three-fourths (71%) visit social media platforms multiple times a day (Smith & Anderson, 2018). With few exceptions, Internet pornography is available to most users around the world and has become the primary means by which most individuals’ access and/or share sexually explicit material (e.g., photos, web videos, erotic stories). Mobile pornography use is also increasing given the number of free and/or low-cost smartphone applications that allow users to access their preferred type of pornography while on the go and from the convenience of their private phone.

Given the rapid Internet-related technological advances that have occurred over the past two decades, societies around the world are witnessing a major behavioral shift in how people communicate with one another. Online social networking sites (e.g., Facebook, Instagram, Pinterest, Twitter, etc.) are now widely used by billions of people across the globe. (p. 242) These websites allow users to build social networks and/or social relations among people who share interests, activities, and/or real-life connections. Many of these social networking sites also can be accessed from a smartphone which allows users to display their geographic location when posting or sharing status updates or photos to those listed within their social community. Given that sexual behaviors appear to be shifting as a function of recent technological advances made within the past 20 years, researchers have also started to study how geosocial networking smartphone applications (e.g., Grindr, Tinder, Bubble, OkCupid) are being used to mediate casual sex (“hookups”) interactions among adolescents, men who have sex with men (MSM), and heterosexual adults. This chapter discusses some of the potential negative impacts of computer-mediated sexual behaviors among adolescents and young adults.

Internet Pornography: Sex at Your Fingertips

The Internet has transformed how people access and share pornographic material. Although definitions vary by author, pornography is typically defined as material intended to produce sexual arousal or sexual excitement in the consumer. In general, males, more so than females, report using pornography for solitary masturbation. Couples’ use of pornography appears to occur less frequently; however, some couples do use pornography as a means of enhancing their sexual intimacy (Maddox, Rhoades, & Markman, 2011). Prior to the 1990s, the ease of obtaining pornography varied greatly depending on the content of the material, geographic location of the user, and laws prohibiting or restricting its sale. Recreational users of pornography often needed to visit adult bookstores, send away for materials via the postal service (i.e., getting mail delivered to the house in a “black or brown envelope”), or visit adult movie theatres. Each of these behaviors carries risks of exposing one’s anonymity and private sexual practices to the public. However, beginning in the mid-1990s, Internet access began finding its way into the private homes of people, and pornography could be viewed from behind closed doors. The rapid growth of Internet pornography was most likely attributed to three significant fac-

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tors: accessibility, affordability, and anonymity (Cooper, Delmonico, & Burg, 2000). In addition, the surge of Internet pornography more recently is likely attributable to the tens of thousands of websites offering free sexually explicit material (sometimes referred to as “adult-only tube sites,” e.g., PornoTube, RedTube, You-Porn, Xhamster) available on the Internet (Wallace, 2011).

It is unclear how many people in the world use pornography regularly. While the exact prevalence of pornography use remains unclear, daily visits to pornographic websites are projected to be in the millions. A recent study evaluated data collected from the General Social Survey (GSS) over a 40-year period (1973–2012) and examined changes in attitudes toward pornography viewing and consumption behaviors among American young adults. Overall, they found that pornography viewing was increasing across birth generations. Specifically, 61% of young men (18–26 years old) and 36% of young women (18–26 years old) reported past year use of pornography (Price, Patterson, Regnerus, & Walley, 2016). Obtaining accurate prevalence estimates on pornography use poses a unique set of challenges for social scientists and policy lawmakers, both of whom may be interested in understanding the effects of pornography use on the sexual practices of its viewership. Data drawn from survey-based studies suggest pornography use is common among adolescents and young adults, but not completely absent from middle-aged and older adults. Although some older adults express concerns about declining sexual functioning as they age, many older adults remain sexually active (Lindau et al., 2007; Træen et al., 2018). A major limitation of the current literature is that it has focused primarily on studying the effects of pornography use among adolescents and young adults and sidestepped questions about middle-aged and older adults. Rates of pornography viewing among older men (ages 54–62 years old) have increased from 13.6% between 1973 and 1980 to 22.5% in 2008–2012, although rates for older women (54–62 years old) have remained stable (6.5%, 1973–1980 to 7.2%, 2008–2012) (Price et al., 2016). Research examining pornography use, which could include problematic pornography use, among older adults remains understudied.

Although both men and women view pornography, research suggests men are exposed to pornography at an earlier age, become more physiologically aroused when watching pornography, and are more likely to masturbate to pornography regularly (Hald, 2006; Hald & Malamuth, 2008; Kraus & Rosenberg, 2014; Morgan, 2011; Paul, 2009). As one example, one study (Sabina, Wolak, & Finkelhor, 2008) surveyed 563 college students and found that average age for first exposure to pornography for males and females was around 14 years of (p. 243) age. However, recent evidence suggests that age for first exposure to pornography may be on the decline for some adolescents, particularly for males, who are more likely to seek and view pornography during early adolescence (Beyens, Vandebosch, & Eggermont, 2014; Gola, Lewczuk, & Skorko, 2016). For example, one study (Beyens et al., 2014) found that boys with an advanced pubertal stage and boys high in sensation-seeking used Internet pornography more frequently than did boys in less advanced stages of development or boys with lower levels of sensation-seeking.

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Other researchers (Kraus & Rosenberg, 2014; Sinković, Štulhofer, & Božić, 2013) have found that the mean age for first exposure to Internet pornography for males was closer to 11–12 years of age. This lower age of first exposure to pornography (and presumably at an age when boys first masturbate to pornography) may be due, in part, to the increased availability of Internet access occurring in the United States and around the world. One US study found that less than half of the youth (10–17 years of age) surveyed had Internet-blocking and/or Internet-monitoring software installed on their home computers (Ybarra, Finkelhor, Mitchell, & Wolak, 2009). Currently, there exist little data on the prevalence and use of Internet-blocking and/or Internet-monitoring software programs being used on home computers to block sexually explicit materials from children and adolescents. Moreover, each year, the number of children who own a smartphone with Internet capabilities increases, and it is unknown what proportion of these children and adolescents are using their mobile devices to access pornography without their parents/guardians knowledge. As one example, a large study of Flemish teenagers (Vanden Abeele, Campbell, Eggermont, & Roe, 2014) found that 9% of teenagers viewed mobile pornography. Boys (13.9%), more so than girls (3.4%), were more likely to use their smartphone to access pornography. A recent review of 20 years of research on adolescents' pornography use found that prevalence rates vary greatly by country but, in general, adolescents' pornography users are male, sensation-seeking at a more advanced pubertal state with weak or strained family relationships (Peter & Valkenburg, 2016).

Obtaining reliable prevalence estimates of Internet pornography use and other online sexual behaviors is currently lacking in the field. Only a few studies have examined the prevalence of pornography use, with two studies assessing use in large samples of Swedish adolescents (Svedin, Åkerman, & Priebe, 2011) and US adult males (Wright, 2013). Survey data from a nationally representative study of 2,075 US adults indicated that roughly half of the participants reported lifetime pornography viewing. Among men and women with reported lifetime pornography viewing history ($n = 1,461$), 70% of men and 33% of women reported past-year pornography use. Among past year users of pornography, 47% of men and 16% of women reported at least monthly pornography use (Grubbs, Kraus, & Perry, 2018). Given the existing literature, researchers sometimes extrapolate prevalence estimates from studies utilizing convenience samples collected mostly from university and community members, and this process has significant limitations (e.g., selection bias; limited generalizability due to lack of cultural, sexual, and ethnic diversity; issues with sampling methods). Despite these limitations, data drawn from multiple studies (see Table 21.1) suggest that Internet pornography use is relatively more common among males than females, regardless of age, ethnicity, and country of origin. In the future, the adoption of population-based epidemiological approaches aimed at assessing the prevalence of Internet pornography and problems associated with problematic use would aid in the development and evaluation of treatment approaches for individuals requiring professional assistance.

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Table 21.1 Proportions of adolescents and adults' reported pornography use

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Sample	Authors	Country	Duration	N	Prevalence estimates (%)
Adults:	Bačak a & Štulhofer (2011)	Croatia	1 year	416	Female (34.2)
	Carroll et al. (2008)	United States	Weekly	813	Male (48.4), Female (3.2)
	Chi et al. (2012)	China	1 year	1,403	Male (86.2), Female (15.6)
	Gordon & Kraus (2010)	United States	Lifetime	264	Male (98.2), Female (69.3)
	Grubbs et al. (2019)	United States	1 year	1461	Male (70), Female (33)
	Hald & Malamuth (2008)	Denmark	Lifetime	688	Male (97.8), Female (79.5)
	Lam & Chan (2007)	China	Lifetime	229	Male (93)
	Morgan (2011)	United States	Six months	782	Male (78.8), Female (30.9)

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	Regnerus, Gordon, & Price (2016)	United States	Past week	5165	Male (46), Female (16)
	Rosser et al. (2013)	United States	90 days	1,391	Male (98.5)
	Shaughnessy et al. (2011)	Canadian	30 days	217	Male (83.3), Female (30.8)
	Sun et al. (2016)	United States	Weekly	487	Male (58.7)
	Wright (2013)	United States	1 year	14,193	Male (36)
Adolescents:	Braun-Courville & Rojas (2009)	United States	Lifetime	433	Male (85.7), Female (50.1)
	Luder et al. (2011)	Switzerland	30 days	6,054	Male (29.2), Female (1.4)
	O'Sullivan (2014)	Canadian	Lifetime	269	Male (84.4), Female (46.4)
	Ševčíková & Daneback (2014)	Czech	Lifetime	2,950	Male (61.8), Female (52.6)

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	Svedin et al. (2011)	Sweden	Weekly	4,026	Male (28.6). Female (1.5)
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Associations Between Mental Health Outcomes and Frequency of Pornography Use

Despite evidence suggesting that pornography use may be nonproblematic for many users and could possibly have benefits as a sexual outlet (e.g., sexual aid, educational tool used to acquire sexual health information about sexually transmitted infections), research indicates that a smaller subset of users develop difficulty moderating their use of pornography, which, in turn, is associated with negative mental health outcomes. Several studies have examined the correlates of excessive use of pornography and its associations with psychosocial and/or psychological distress (Kor et al., 2014; Kraus, Potenza, Martino, & Grant, 2015; Ross, Mansson, & Daneback, 2012). Data drawn from a US nationally representative sample of 2,075 Internet users recently found that 11% of men and 3% of women reported “feeling addicted to pornography” (Grubbs, Kraus et al., 2019). Study findings suggest that reports of more frequent pornography use are positively associated with feelings of loneliness (Yoder, Virden, & Amin, 2005), increased psychopathology (p. 244) (Kor et al., 2014; Reid, Carpenter, & Lloyd, 2009; Ross et al., 2012; Twohig & Crosby, 2010), narcissism (Kasper, Short, & Milam, 2014), and impulsivity, risk-taking, and sensation-seeking (Chen et al., 2018; Wetterneck, Burgess, Short, Smith, & Cervantes, 2012).

Some evidence also indicates that higher levels of pornography use are associated with lower levels of relationship commitment, sexual satisfaction, and relational aggression among heterosexual couples (Doran & Price, 2014; Lambert, Negash, Stillman, Olmstead, & Ficham, 2012; Poulsen, Busby, & Galovan, 2013; Willoughby, Carroll, Busby, & Brown, 2016; Willoughby & Leonhardt, 2020). Specifically, both quantitative and qualitative studies posit that Internet pornography use by a partner can be problematic to romantic relationships (Ayres & Haddock, 2009; Manning, 2006), in part because it may impair healthy attachment and trust in adult pair-bond relationships (Willoughby et al., 2016). As one example, researchers (Maddox, 2011) examined associations between pornography use and relationship functioning in a random sample of 1,300 unmarried couples. They found that individuals who viewed pornography with their partner reported levels of higher dedication and sexual satisfaction than individuals who viewed pornography alone. Individuals who never viewed pornography reported the highest levels of relationship quality and lowest levels of infidelity. Another study (Doran & Price, 2014) using data on 20,000 ever-married US adults collected during 1973–2010 found males’ use of pornography reduced the positive relationship between frequency of sex and happiness. Their findings also suggested that the negative relationship between pornography use and marital well-being continued to grow stronger over time, which they posited could be related to the increased accessibility to pornography occurring within the United States. However, this hypothesis awaits further research.

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Among conservative Christian men, pornography use is associated with poor mental health outcome (e.g., depression, anxiety), perhaps because the behavior conflicts with individuals' intrinsic religious beliefs about moral behavior within church-abiding members (Grubbs, Sessoms, Wheeler, & Volk, 2010; Grubbs, Volk, Exline, & Pargament, 2015; Nelson, Padilla-Walker, & Carroll, 2010). For example, for some Christian men, pornography use may be ego-dystonic, thus reflected by an increase in self-reported mental health problems coupled with strong feelings of guilt and shame (Wilt, Cooper, Grubbs, Exline, & Pargament, 2016). Additional research examining the correlates of mental health, religiosity, and pornography are needed given some current gaps in understanding. More research is needed to examine the relationship between mental health outcomes and pornography use among individuals with different (i.e., non-Christian) faith perspectives, including among individuals reporting moral incongruence (p. 245) related to their pornography use (Grubbs, Perry, Wilt, & Reid, 2019). The existing research on mental health functioning among religious individuals has relied primarily on individuals who self-identify as Christian.

Developmental considerations regarding exposure to pornography also warrant consideration. Youth exposure may alter sexual arousal templates and lead to unrealistic expectations about dyadic sexual behaviors, and individuals have advocated for stronger legislation to help protect youth from exposure to pornography (Binford, 2018). There exist reports of pornography leading to erectile dysfunction, with self-help groups (e.g., No Fap) available for young men to cease pornography viewing (NoFap.com, 2017; Reboot Nation, 2017). Additional longitudinal studies are needed to examine these and other potential outcomes related to pornography use.

Despite the body of correlational studies examining the relationship between pornography use and negative mental health outcomes (e.g., depression, generalized anxiety), correlational research does not answer questions related to causation or explain the directionality of associations. For instance, it is unclear whether regular or even heavy pornography use may cause psychological distress, if individuals experiencing mental health problems may be more likely to have difficulty controlling their behavior because they are using pornography consumption as a means to cope with negative emotional states or stress, or if other options exist (e.g., a common feature leading to the development of psychopathology and viewing of pornography). Additional research using naturalistic longitudinal study designs would be useful in better understanding the effects and consequences of using pornography across the life span.

Pornography Use and Casual Sex

The phenomenon of having casual sex (i.e., "one-night stands" or "hookups") is not new. However, there is some evidence that hookups are becoming increasingly more deep-seated in popular culture, reflecting both evolving sexual preferences and altered social and sexual scripts (Garcia, Reiber, Massey, & Merriwether, 2012). Some data suggest that hookup behaviors (e.g., kissing, oral sex, and penetrative anal and vaginal intercourse)

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are becoming progressively normative among US adolescents and young adults, reflecting more accepting attitudes toward relationally uncommitted sex. Given some of the health risks associated with having unprotected sex, researchers are studying the behaviors of and reasons for having casual sex and its associated risks for adolescents and young adults. For instance, researchers (Grello, Welsh, & Harper, 2006) investigating the circumstances associated with casual sex among university students found that casual sex occurs more commonly between “friends” than strangers, and people are more likely to have one night stands when they have been drinking or using drugs. In their survey they found that men (52%), more so than women (36%) reported having engaged in casual sex. They also found that among women, but not men, casual sex was associated with depressive symptoms. Another study (Eisenberg, Ackard, Resnick, & Neumark-Sztainer, 2009) found one-fifth of sexually active adults surveyed indicated their most recent sexual partner was a casual partner (29% males, 14% females). Additionally, they found no significant associations between partner type and psychological well-being (e.g., body satisfaction, self-esteem, depressive symptoms, and suicidal ideation) as a function of partner type (i.e., casual, committed). A recent study of college-aged students found a greater proportion of men (18.6%) compared to women (7.4%) reported having had casual sex in the past 30 days. Regardless of gender, casual sex was negatively associated with well-being (e.g., self-esteem, life satisfaction) and positively correlated with psychological distress (e.g., general anxiety, social anxiety, and depression) (Bersamin et al., 2014).

Although hookup behaviors are not new, the methods for how people are finding causal sex partners are changing. People are using technology to meet others for sex, and some researchers are particularly interested in understanding what influence, if any, that pornography viewing has on young adults’ sexual behaviors. Specifically, researchers are studying the associations between frequency of pornography use and engaging in risky sexual behaviors (e.g., condomless anal or vaginal sex, frequent multiple sexual partners) among adolescents, MSM, and young adults (Braithwaite, Coulson, Keddington, & Fincham, 2015; Braun-Courville & Rojas, 2009; Willoughby et al., 2014; Wright & Randall, 2012). Some researchers have proposed that pornography teaches its viewers “sexual scripts” about how to interact with other partners. According to Gagnon and Simon (2017), sexual scripts are socially constructed and influenced by societal norms and mass media in addition to one’s own personal experiences, values, and preexisting attitudes. That is, sexual media potentially influence their viewers (p. 246) through acquisition of behavioral scripts, followed by activation and application of those scripts to everyday life (Wright, 2011). As one example, researchers (Braithwaite et al., 2015) examined the relationship between pornography use and risky sexual behavior among emerging adults in college. They found more frequent viewing of pornography was associated with a higher likelihood of hooking up and a higher number of unique hookup partners. Using both cross-sectional and longitudinal approaches that accounted for the stability of hookups over the course of an academic semester, Braithwaite and colleagues found more frequent viewing of pornography was associated with having had more previous sexual partners of all types, one-night stands, and plans to have a higher number of sexual partners

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in the future. They also found evidence that more permissive sexual scripts mediated the association between more frequent pornography viewing and hooking up.

Similarly, researchers (Sun, Bridges, Johnason, & Ezzell, 2016) examined the role pornography plays during dyadic sexual encounters and its associations with heterosexual men's intimacy and sexual concerns. Specifically, they found that higher levels of pornography use were associated with requests by males for their partners to perform specific sex acts commonly depicted in pornography, needing to conjure pornographic images in one's mind during sex to maintain arousal, and having concerns over one's own sexual performance and body image. Additionally, they found that higher pornography use was negatively associated with enjoying actual sex with a female partner. The authors posited that pornography provides a powerful heuristic model which could be potentially altering men's expectations and behaviors during real-life sexual encounters with female partners.

Smartphones, Sexting, and Hooking Up

Prior to the Internet, people generally met potential casual sex partners through face-to-face encounters at parties, bars, clubs, social events, etc. Today, however, people are using the Internet to find casual sex partners. Smartphone applications with customizable profiles allow users to highlight the attributes (e.g. height, weight, hair color, body type, sexual preferences, penis size, chest size, etc.) they feel are most desirable. The applications may also provide their geographic location for those interested in meeting in person for sex. In recent years, the development of smartphone applications designed to facilitate casual sex has increased as their popularity continues to rise. These smartphone applications are designed for use by non-heterosexual (e.g., Grindr, FindFred, Scruff, Skout, Hornet, etc.) and heterosexual (e.g., Tinder, Pure) individuals. Recently, researchers have started studying how these applications are being used by MSM and some of the health risks associated with meeting sex partners via the Internet (Lehmiller & Ioerger, 2014). For example, one study (Lehmiller & Ioerger, 2014) found that application users reported significantly more sexual partners and had a higher prevalence of ever having been diagnosed with a sexually transmitted infection than did non-users; however, they did not find significant differences on personality variables (e.g., erotophilia, sensation-seeking, and self-control) between users and non-users. Among college students, a recent study found that users of dating apps were more likely to have had unprotected sex with a casual sex partner the last time they engaged in sexual intercourse. Moreover, using dating apps for more than 12 months was associated with having a casual sex partner in the last sexual intercourse and with having unprotected sex with that casual partner (Choi et al., 2016).

Among a sample of young MSM who use Grindr, researchers (Winetrobe, Rice, Bauermeister, Petering, & Holloway, 2014) found 20% of the men they surveyed had unprotected anal sex with their last Grindr-met partner. Moreover, men who used Grindr for at least 1 year were more likely to report Grindr-met partners and engagement in unprotected anal intercourse, a notable risk behavior associated with the spread of HIV. Beymer et

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al. (2014) surveyed 7,000 MSM in Los Angeles County who used geosocial networking phone applications and found greater odds of testing positive for gonorrhea and Chlamydia compared to individuals who had met partners through in-person methods only. There were no significant differences noted for HIV or syphilis between users and non-users. A recent study found that of 686 HIV-negative Chinese MSM surveyed, 62.8% ($n = 431$) used geosocial networking apps (GPN) to find sexual partners. GSN apps' users as compared to non-users were younger; had an earlier age of sexual debut; and, in the past 3 months, were more likely to have used recreational drugs, more likely to have had five or more casual partners, more likely to have had group sex with males, and more likely to have had condomless anal intercourse with male steady partners (Xu et al., 2018). Among a US veteran sample, seeking sex with partners met through social media was correlated with multiple mental health concerns (p. 247) including depression, posttraumatic stress disorder (PTSD), insomnia, and suicidal ideation (Turban, Potenza, Hoff, Martino, & Kraus, 2016).

Currently, the use of sex-specific smartphone applications has not been studied widely among heterosexual men and women (Anzani, Di Sarno, & Prunas, 2018). The widespread use of social networking sites for sexual communication and partner seeking presents unique opportunities for the development of public health interventions intended to reduce some of the sexual risks for users (Holloway et al., 2014). Additional research is needed to better understand the psychological characteristics of app users as well as the positive sexual relationship outcomes of app use (Anzani et al., 2018).

Craigslist: Looking for that Special Casual Encounter

The use of websites such as Craigslist (a well-known classified online advertiser of jobs, housing, personals, items for sale, community activities, etc.) also appears to be another method used by individuals to post ads ("casual encounters") to find interested parties for casual sex. Results drawn from meta-analyses (Liau, Millett, & Marks, 2006) suggest that 40% of MSM have used the Internet to look for sex partners, and those who use the Internet to find sex partners are more likely to be HIV-positive than HIV-negative. Additionally, they found that MSM who used the Internet to find sex partners were more likely to have unprotected anal sex than those who did not. Overall, initial evidence suggests that, for MSM, there are a substantial percentage of men who use the Internet to find sexual partners, and these individuals are more likely to engage in unprotected sex than are men who meet their partners in person. Another study (Grov, 2012) evaluating whether MSM recruited participants from gay bars/clubs and bathhouses and off Craigslist.org, differed in behavioral and demographic characteristics. The study found that, among MSM who recently had anal sex, those on Craigslist reported the least condom use, even though 13.5% of these men were also HIV-positive. In sum, additional research is needed to examine potential risk factors associated with computer-assisted sexual behaviors, given

that this method of seeking partners may continue to grow in popularity and use around the world.

Sexting and Risky Sexual Behaviors

The topic of “sexting” (defined as sending and/or receiving sexually explicit material via a cell phone) has garnered significant media attention recently. Concerned parents, policy-makers, and researchers are interested in understanding the associated risks, if any, of sexting among adolescents and adults. Is sexting a gateway behavior for casual sex? A recent systematic review of 32 studies (Klettke, Hallford, & Mellor 2014) indicated that sexting is more common in adults than adolescents, and more individuals report receiving sexts than sending them. Prevalence estimates of adolescents sexting is around 10–15% (Back, Lee & Stinchfield, 2011; Klettke et al., 2014; Mitchell, Finkelhor, Jones, & Wolak, 2012; Rice et al., 2012). A recent meta-analysis of 39 studies (110,390 youth participants) found that the average prevalence estimates for sending and receiving sexts were 14.8% and 27.4%, respectively (Madigan, Ly, Rash, Van Ouytsel, & Temple, 2018). Researchers (Strassberg, McKinnon, Sustaíta, & Rullo, 2013) surveyed US high school students and found that nearly 20% of students reported they had sent a sexually explicit picture via cell phone, and, of these, over 25% indicated that they had forwarded such an image to others (a notable risk behavior which could carry legal consequences for the sender and receiver of the text).

Similar to youth, young adults are also sexting. Among adults, the prevalence of sexting is around 50% (Dir, Cyders, & Coskunpinar, 2013; Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013; Klettke et al., 2014). The most common demographics associated with adult sexting include female gender, being unmarried, and LGBT identity (Dir et al., 2013; Wysocki & Childers, 2011). Demographics related to sending sexually explicit photos of oneself include white race, lesser religious service attendance, lesser education, and LGBT identity (Wysocki & Childers, 2011).

Compared to their non-sexting counterparts, those who engaged in sexting were more likely to have had recent substance abuse and engaged in high-risk sexual behaviors such as unprotected sex and sex with multiple partners in the past 3 months. Of those who engaged in sexting, roughly a third reported having sex with a new partner for the first time after sexting with that person (Benotsch, Snipes, Martin, & Bull, 2013). Similarly, researchers (Dir et al., 2013) investigating sexting behaviors among young adults found initial support for sexting as a partial mediator between problematic alcohol use and sexual hookups, and for the role of impulsivity-related features and alcohol expectancies as distal predictors in this process. Currently, additional research is needed to better understand the (p. 248) roles and correlates of sexting and sexual risk-taking, though it appears that these behaviors are common among both adolescent and adults.

Conclusion

This chapter reviewed some of the ways digital technologies are potentially shaping the sexual behaviors of adolescents and young adults. Internet pornography is now highly accessible to most computer users around the world. The effects of frequent pornography use on users' sexual beliefs and practices remain largely unknown. Sexting is common among adolescents and adults, with some initial evidence finding that sexting was a partial mediator between problematic alcohol use and sexual hookups. The use of smartphone applications designed to help users find casual sex partners in their geographic area is on the rise as popularity and acceptability of having relationally uncommitted sex may be increasing over time. Additional research is needed to examine the influences that digital technologies could be having on the sexual practices of adolescents and emerging adults who may be spending increasingly more time online.

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