Trends in Adolescent Development Impacting Practice: How Can We Catch Up?

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Trends in Adolescent Development Impacting Practice: How Can We Catch Up?

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Changes in the mechanisms of communication and advances in brain imaging technology shape understanding and interpretation of the manner in which adolescents process and respond to information and relate to others. Knowledge about how trends in adolescent development should inform practice with adolescents is limited, and yet emerging trends and new discoveries have implications for adolescent relationships, behavior, and well-being. Our purpose was to critically examine the influence of major technological innovations on adolescent development and the impacts on research and practice with vulnerable adolescent populations. We discuss strategies for researchers and practitioners.

Keywords: Adolescence, brain development, practice, technology, relationships

In the past two decades, a number of important technological advances have dramatically changed understandings of the adolescent life stage. In response, some of the varied topics that have been the subject of scholarly debate and discussion include when adolescence begins and ends, the developmental tasks associated with this phase of life, whether adolescence is a time of dysfunction and angst or adaptation and discovery, the optimal development of the adolescent brain, and what adolescents should and could contribute to society (Arnett, 2000; Lerner, Almerigi, Theokas, & Lerner, 2005; Weinberger, Elvevag, & Giedd, 2005). Researchers assert that adolescence looks very different for young people across diverse ethnic, cultural, immigration, sexual identity, and economic backgrounds (Fowler, Toro, & Miles, 2011; Fuligni, 2007; Torkelson, 2012). Differences in family responsibilities, access to technological resources, and cultural and societal norms are just a few examples. While adolescents are not in as much turmoil as some theorists and media images have led the public to believe (Aubrun & Grady, 2000; Farkas, Johnson, Duffet, & Bers, 1997; Freud, 1958; Hall, 1916), the complexity of modern social issues presented at relatively younger ages suggests adolescents live in a more challenging world to develop physically and psychologically.

Innovations such as social networking sites encouraging a new way of relating to others and the changing face of communication are particularly important to the adolescent who lives in a highly social environment. At the same time, these changes have made it increasingly difficult for researchers and practitioners to keep pace with new innovations and apply these to the complex world of practice. Updates to understandings of adolescent development emerge incrementally through individual studies. Often, reviews of research attempting to capture these results focus on one area such as brain development (e.g., Weinberger et al., 2005) and do not synthesize findings.
from multiple areas of study such as neuroscience and social science. Similarly, such reviews often do not distill information specifically for practice with vulnerable adolescent populations.

In the context of the varied views on adolescence, interpreting research findings for practice implications can be complex, and many issues require more research. For example, brain imaging technology indicates that different parts of the brain mature at different times, presenting considerable challenges for decisions about age of consent, voting age, legal age to drink, and so on (Steinberg, 2010). If the adolescent brain is not fully formed, parents and practitioners are likely to intervene differently by assuming some adolescent behaviors are normative and can be contextualized within an understanding of development. Similarly, a better understanding of the relational patterns of adolescents might provide insight into behavior that appears on the surface to be dysfunctional.

Recognizing the magnitude of the literature on adolescent development, our goals were to identify areas of significant innovation and clearest relevance to direct practice with adolescents. Specifically, we searched the research literature focused on adolescence and adolescent development to identify recent research areas in which the findings challenge existing knowledge or suggest an alternative response to what is commonly understood to be good practice. Our intention was to narrow this analysis to those issues that might have the greatest impact on how practitioners and researchers understand and work with adolescents. Summarized in Table 1 and described below, we organize the findings and practice implications by how adolescents process and respond to information followed by how adolescents relate to others.

**PROCESSING AND RESPONDING TO INFORMATION IN ADOLESCENCE**

As a result of magnetic resonance imaging (MRI) technology and neuroscience expansion (Giedd, 2008), the previously underexplored context of brain development fills in some of the gaps in understanding about why adolescents behave the way they do, stimulating the need for critical thinking about how practitioners might best respond. Similar to early childhood when parents attend to the enormous growth in cognitive, social, and physical development in their children, adolescence represents a time to attend to the opportunities presented by developmental processes. While brain development is sometimes used against adolescents to describe how they are not fully functioning or are dysfunctional, neuroscience suggests that the adolescent developmental period is a distinct opportunity to learn skills when the brain is malleable (Gogtay & Thompson, 2010). These changes during the brain plasticity of adolescence (Steinberg, 2010) assist with a successful transition to adulthood, where they become solidified. The ability of parents and practitioners to identify the skills that are best learned in adolescence, based on critical timing from brain development, represents a much-needed innovation in clinical assessment, prevention, and intervention with adolescents. Below we examine interrelated skills that are critically timed with adolescent brain development resulting from increasing sophistication of the prefrontal cortex and complexity and efficiency of neural connections, among other important changes (for detailed reviews of neurological changes in adolescence, see Dahl & Spear, 2004; Luciana, 2010; Weinberger et al., 2005).

**Reasoning and Decision Making: Do adolescents really believe that they are invulnerable?**

Risk taking is not always detrimental, and adolescents learn by taking some calculated risks (e.g., learning to drive, establishing new relationships). In fact, the emerging evolutionary model suggests some risky behavior serves (or once served) an evolutionary purpose (Ellis et al., 2012),
TABLE 1
Research Findings and Practice Implications

<table>
<thead>
<tr>
<th>Adolescent Development</th>
<th>Practice Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing and responding to information</td>
<td>Help identify “safer” ways to practice skills such as simulated realistic situations and everyday conversations.</td>
</tr>
<tr>
<td>Some risk behavior may be adaptive (Ellis et al., 2012).</td>
<td>Assess individual adolescent’s needs at different points in time for more or less adult intervention; be careful not to make the assumption that an individual adolescent cannot handle decision-making but also be careful about providing no support to a developing adolescent.</td>
</tr>
<tr>
<td>Increased ability to handle neural information yet cognitive areas needed for reasoning and planning are still developing (Blakemore &amp; Choudury, 2006; Swanson, 1999).</td>
<td>In particular, in preventive interventions, do not target universally limited risk knowledge; instead, assess what adolescents already know and what they do as a first step.</td>
</tr>
<tr>
<td>Adolescents do not believe they are invulnerable; they tend to overestimate risks; they tend to use rational decision-making (Reyna &amp; Farley, 2006).</td>
<td>Aid decision-making abilities by giving experiences in lower risk situations and interactive simulations of “real-life” situations.</td>
</tr>
<tr>
<td>Adolescents do not use “gist-based” decision-making like adults do (Reyna et al., 2005).</td>
<td>Propose interventions that teach skills in realistic contexts such as around peers or under intense academic pressure.</td>
</tr>
<tr>
<td>Reasoning and decision-making are impacted by social context (Gardner &amp; Steinberg, 2005; Reyna &amp; Farley, 2006).</td>
<td>Take seriously the need for positive role models and engage extra-familial adults in supporting adolescents through formal programs such as mentoring and informal societal expectations by communicating the importance in media and other outlets.</td>
</tr>
<tr>
<td>Early and late adolescents in particular listen to advice from an authority figure (Englemann et al., 2012).</td>
<td>Target lower income adolescents in preventive efforts such as after-school programs, and provide specialized technical training to help narrow the gap for vulnerable adolescents.</td>
</tr>
<tr>
<td>The digital divide differs for physical access versus digital skills (van Dijk, 2006).</td>
<td>Practice making conscious decisions about technology use; adults should model good decisions; assess and attempt to understand the individual adolescent’s personality and personal and contextual resources before assuming a universal strategy.</td>
</tr>
<tr>
<td>Multitasking can be distracting (Meyer et al., 1997; Ophir et al., 2009; Rubinstein et al., 2001).</td>
<td>Pay attention to high-risk adolescents and screen for depression; encourage time alone to “disconnect”; adults can model adaptive disconnections from technology; select certain days or time within the day to spend alone for a “strategic retreat.”</td>
</tr>
<tr>
<td>Relating to others</td>
<td>Impose age-appropriate limits; balance parental control with the adolescent’s desire for autonomy; encourage community and societal norms to support parents.</td>
</tr>
<tr>
<td>Adolescents prefer to spend more time alone than children; moderate amounts of time alone can have a positive psychological effect (Larson, 1997; Larson &amp; Csikzentmihalyi, 1978).</td>
<td>Adults need to know how adolescents are using technology and use this information and the adolescent’s language when communicating and developing treatment strategies.</td>
</tr>
<tr>
<td>Increased use of Internet; relatively low parental supervision of what adolescents are doing online (Mishna et al, 2012; Picard, 2007). Use of technology for bullying (Mishna et al., 2012) and facilitating dating violence (Offenhauer &amp; Buchalter, 2011).</td>
<td></td>
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</table>
but how well are adolescents able to determine the potential consequences in a risky situation? Parents and practitioners want to help adolescents learn from experiences and to have the skills to avoid the risks that may have serious and permanent health and safety consequences.

Reasoning and planning abilities (logical reasoning, forming strategies, setting priorities, and organizing plans/ideas) are aided by the adolescent’s ability to handle neural information that is sent more rapidly than in childhood through myelinated axons in the frontal cortex, allowing the adolescent time to process and consider choices (Blakemore & Choudhury, 2006). However, the adolescent brain is somewhat limited in other cognitive areas that are needed to reason and plan, such as working memory that enables abstraction and the ability to hold multiple pieces of information simultaneously (Swanson, 1999). These cognitive abilities are tied to many different decision-making processes in young people that impact risk behavior and adaptive behavior.

Some thought-provoking research coming out of the Center for Behavioral Economics and Decision Research at Cornell University suggests many interventions targeting risk taking in adolescence are misguided by erroneous understandings of how adolescents reason and make decisions. Summarizing across a number of studies, Reyna and Farley (2006) suggest that, contrary to popular opinion, adolescents do not believe that they are invulnerable; they actually tend to overestimate rather than underestimate important risks, and they tend to use rational decision-making processes. Ironically, some interventions are off the mark by generally targeting adolescent vulnerability beliefs, limited risk knowledge, and irrationality.

One of the most interesting implications of this work is the application of understanding decision-making processes among adolescents. If adolescents are, on the whole, employing a rational decision-making process, why do adolescents take seemingly irrational risk-taking behavior in adolescence? The “fuzzy-trace theory” suggests children and adolescents naturally rely on a logical, deliberate model of decision making that balances benefits versus costs (Reyna, Adam, Poirer, LeCroy, & Brainerd, 2005). This may seem reasonable; however, the “gist-based” decision-making process employed by adults with more mature life experience and brain development actually leads to more effective decisions (Reyna et al., 2005). In this type of decision making, intuition based on prior experience and situational cues is used to get to the bottom line relatively quickly. These results suggest the need to engage opportunities to gain experience as the brain develops and also to reduce obvious risk situations with serious consequences. An interesting application of such an understanding was used to promote better sexual decision making among female adolescents (Downs et al., 2004). The intervention was aimed at helping adolescents perceive the opportunity to make choices, learn safer behavior through information and modeling, and practice choices through cognitive rehearsal. In a randomized design with 300 urban adolescent girls, the interactive video intervention in which the adolescents were presented with realistic choices and behavioral response alternatives (in comparison to two information-based control conditions) resulted in a greater likelihood of self-reported abstinence. Also, fewer condom failures at the 3-month follow-up and a significantly lower likelihood of being diagnosed with an STD at the 6-month follow-up were found (Downs et al., 2004).

Like the ability to self-regulate, decision making occurs in a social context, and research suggests adolescents make more risky decisions around peers than they do when alone (Gardner & Steinberg, 2005; Reyna & Farley, 2006). Examining sensitivity to the social context alongside adolescent brain development, Engelmann, Moore, Capra, and Berns (2012) examined the influence of risk-arousing versus risk-averse advice during early adolescence, late adolescence, and adulthood. Results indicate advice from an authority figure differentially impacts these groups and has the greatest effect on early and late adolescents. Interestingly, neuroimaging results suggest neural correlates of this response occur in different regions for adolescents than adults, in the dorsolateral prefrontal cortex where the adolescent brain is still developing (Engelmann et al., 2012). While the authors did not examine advice given from a peer, the results contradict commonly held beliefs that adolescents rarely, if ever, listen to advice from adults.
If reasoning and decision making are impacted by the social context and neurological developments, researchers and practitioners should propose interventions that teach young people skills for navigating context-specific environments at critical time points, such as under academic pressure or around peers, rather than simply teaching general skills and expecting these to be blindly applied. And challenging the notion of adult influence on adolescents and encouraging involvement with multiple positive adults to learn diverse and effective behavioral response possibilities for a range of situations may be well-advised (Weinberger et al., 2005). While a model of mentorship and support beyond the nuclear family exists in some cultures, the overall lack of such an American model places unnecessary additional pressure on the family system (Aubrun & Grady, 2000).

Multitasking and Balancing Priorities: *Is technology helping or hurting?*

The ability to employ logical reasoning, form strategies, set priorities, plan, and self-regulate enables a sophisticated balancing of the many competing priorities that emerge in an adolescent’s world. Specifically, the ability to decide what information to attend to and the concentration it takes to hold attention requires a complex set of social and cognitive skills. As we described, the ability to allocate attention and concentrate is still developing in adolescence as the prefrontal cortex continues to mature (Weinberger et al., 2005). Multitasking ability builds on the growth of increasingly complex and efficient neural connections (Meyer et al., 1998).

In everyday life, adolescents engage in a world of fast-paced imagery and respond to information rapidly through the use of computers, smart phones, and other devices. Yet, some have asserted there are significant differences in access to technology related to economic resources (Roe, 2006). Referred to as the *digital divide*, gaps between populations (e.g., different generations, countries, socioeconomic status) are created as a result of technology and problems groups face in an attempt to keep up with technological advances (APA, 2009). Commonly known as the difference between those who have access to computers and the Internet and those who do not, recent research and critical analysis suggests, when broken down into types of access such as physical access versus digital skills, the gap looks different, with the physical access gap closing but the digital skills gap remaining problematic (van Dijk, 2006). When IBM (2011) reported the digital divide will be closed in 5 years, this was a simplistic understanding of what impacts adolescents considering the relevance of specialized digital skills needed for education and economic opportunities (Peter & Valkenburg, 2006). Practitioners can narrow this gap by offering lower-income adolescents the opportunity to build digital skills. Efforts in after-school programs, for example, can target imbalances in skill level and offer access to Internet and computers and specialized training to build skills that are increasingly needed to be competitive in the marketplace (Jenson et al., 2012).

When it comes to technology, adolescents appear to digitally multitask more quickly and effectively than many adults. Do these mechanisms for receiving and giving information help an adolescent learn to allocate attention and respond or do they complicate the attention process? Is this social environment mismatched with the neurological development of early and middle adolescence for optimal learning? Importantly, are adolescents actually changing their brain functioning by the way they engage with technology? Given the overlapping neurological developments in social, cognitive, and physical contexts we described, it is no wonder these questions are not easily answered.

Interestingly, research suggests multitasking is not always advantageous. While data on adolescents and digital multitasking are still emerging, researchers studying multitasking in adults found that multitasking actually interferes with the ability to concentrate, decreasing overall performance on individual tasks (Kiers, Meyer, Ballas, & Lauber, 2000). Specifically, managing multiple tasks requires the executive processes in the brain to juggle limited resources. Particularly concerning
for the context in which most adolescents engage with multitasking, research coming out of the University of Michigan’s Brain, Cognition, and Action Laboratory demonstrates that switching quickly from task to task requires even more brain functioning resources (Meyer et al., 1997, 1998; Rubinstein, Meyer, & Evans, 2001). Ophir, Nass, and Wagner (2009) found that chronically heavy media multitaskers function less effectively on a number of cognitive control-processing activities (greater difficulty filtering, ignoring, and suppressing irrelevant information) than their chronically light media multitasking peers.

Slowing down the amount and rate of information to allow an adolescent to consciously focus on and attend to one task at a time might be more advantageous. Unfortunately for adolescents, the ability to concentrate, ignore or minimize distractions, and choose sequential activities by priority level is still developing. The additional problem is the brain comes to depend on the stimulation of multitasking, making it increasingly difficult for a developing adolescent with less well-developed impulse control to self-restrict (Hamilton, 2008). Making conscious choices about the use of technology and talking about technology as a tool in this way are important since multitasking is only one skill in a multifaceted set of skills. The fast-paced media world has some researchers questioning whether technological changes are creating a new breed of adolescents and young adults who attend, concentrate, and find a way to learn differently, not necessarily “worse” (Hayles, 2010; Steinberg, 2010). Parents and practitioners should assess both the strengths and challenges of the fast-paced digital environment in the context of the individual adolescent’s personality and learning style as well as other supports without assuming all digital multitasking is detrimental. As an example, at one extreme, some young people who are highly extroverted and social might find a room with no noise to be a distraction, whereas less social and more introverted adolescents might find the same space to be a refuge. Contextualizing recommendations within an understanding of what works for different adolescents based on development, personality, and resources such as parental involvement and attention is critical.

Clearly, the skills adolescents develop as their brains mature impact not only how adolescents think about and process information but how they relate with others. We now examine research on the many ways in which technological influences intersect with this physical, social, and cognitive/neurological developmental period impacting how adolescents relate to the people in their lives.

**RELATING TO OTHERS IN ADOLESCENCE**

Methods of communicating with others have been obviously impacted by advances in technology; however, the subsequent impact on adolescent relationships and the quality of those relationships is debatable and the subject of heated public opinion (Stout, 2010). Has the way contemporary adolescents relate to their parents, friends, and romantic partners changed in a fundamental and meaningful way? Or, has the format of the same problems faced in past generations simply changed? To name a few, researchers and practitioners have long been concerned with parental control, bullying, and the dangers associated with dating (Steinberg, 2001) but, with the onset of cyber-bullying, videos gone viral, “sexting,” and adolescents’ use of private mobile phones at will, have these historical problems reached an all-time high? Importantly, how do changes in how adolescents relate to others impact how we relate to adolescents? We offer strategies to integrate knowledge about adolescents’ relationships into practice.

**Technology and Time Spent Alone: Are adolescents more or less lonely?**

Changing technology has dramatically impacted the amount of time that adolescents spend alone. Seminal work by Larson and colleagues since the late seventies (Larson, 1997; Larson & Csik-
szentmihalyi, 1978) investigated the social contexts of youth, including the proportion of time they spend with family, friends, and alone, using a method that examines behaviors and moods in the settings in which they naturally occur. In these studies and other studies using experience-sampling methods or ecological momentary assessment procedures (e.g., Courvoisier, Eid, Lischetzke, & Schreiber, 2010; Dunton et al., 2012), youth are required to self-report where they are, who they are with, and how they are feeling at the moment they are “beeped” (e.g., via a pager or mobile phone). This methodological approach maximizes ecological validity by collecting self-report observations from youth at random intervals in a given week, rather than relying on retrospective self-reports, and has yielded high reliability and compliance rates (Courvoisier et al., 2010). Findings from these studies suggest that as children enter into adolescence, they prefer to spend more time alone, and time spent alone can have a positive impact on their psychological adjustment. At least a moderate amount of alone time (approximately 25%–45% of waking time; Larson, 1997; Larson & Csikszentmihalyi, 1978) has been linked to better overall adjustment, as rated by teachers and parents, compared to youth who spent too much or not enough time alone. Further, these youth had lower self-reported depression than the other two groups. These effects were significant after adjusting for social opportunities. This positive and adaptive time alone is fundamentally different from the isolative experience of time alone that may be indicative of clinical depression in adolescents (Sharp & Lipsky, 2002). Family members and professionals such as teachers and counselors should be particularly attuned to high-risk adolescents living in stressful home environments or who are socially isolated to provide early detection of depression that can be particularly problematic for the adolescent in the context of normal developmental considerations (Sharp & Lipsky, 2002).

But are today’s youths really ever alone? There has been a historical shift in how “time alone” is spent, for adolescents and adults alike. Given the same conditions, contemporary youths may report that there is no one else in the room with them, yet they potentially have access via computers and mobile phones to a large network of peers and family. On the other hand, does the reduction in time spent face-to-face in lieu of a virtual support system leave youths feeling lonelier? Although research from the past generation identified more negative mood states when youths were alone (e.g., more lonely and unhappy), youths also reported that at the time they were alone they did not wish to do activities or to be with other people, controlling for situational factors such as opportunities for social interaction (Larson & Csikszentmihalyi, 1978). Interestingly, adolescents felt better after being alone and enjoyed time with friends more when they had spent the previous 2-hour period alone (Larson & Csikszentmihalyi, 1978). These findings highlight that voluntary solitude, while perhaps a lonelier and less happy period of daily life, plays a constructive role in adolescents’ lives, at least 30 years ago. In interviews, youth described using their time alone for emotion-focused coping and renewal (Freeman, Csikszentmihalyi, & Larson, 1986). Larson wrote more than 20 years ago, “adolescents’ solitude is valuable, not as an end in itself, but as a strategic retreat from an engaged and social happy life” (Larson, 1997, p. 90). If still true today, which has yet to be tested empirically, these findings have implications for youth navigating a fast-paced and technological society.

Without parental intervention, youth are unlikely to virtually “disconnect” from their peers when they are alone, instead choosing relief from momentary feelings of loneliness or unhappiness over a period of renewal and self-reflection. In addition to potentially compromised psychological adjustment and overall well-being, a lack of time spent alone may have implications for positive autonomy, identity, and intimacy development that require a period of self-reflection. One role practitioners can take is to advocate protecting adolescents’ alone time, a notable challenge in an era that requires a conscious “turning off” period from outside attention that many adults themselves do not model. Strategies could include selecting certain days or hours during the day to be spent alone or ensuring that before or after spending large amounts of time with peers there is time for a “strategic retreat.”
Parents, Friends, and Romantic Partners: Has technology improved or impaired adolescents’ relationships?

Technology has opened up new communication opportunities for youths. Online communication is particularly cost-effective and easy to use, allowing adolescents the opportunity to initiate, build, and maintain relationships with family, peers, and even strangers across varying distances. For adolescents experiencing chronic loneliness or social anxiety, the Internet may offer a safe opportunity to interact without fear of disapproval or rejection (Ando & Sakamoto, 2008). Bonetti, Campbell, and Gillmore (2010) found that particularly for lonely children, Internet interactions were preferred and resulted in more satisfying conversations (e.g., feeling less shy, speaking more intimately).

Technology has also afforded youths new freedoms from parental monitoring and control. Most adolescents no longer experience parent-intercepted phone calls on the single family phone, negotiations around tying up the phone line, and dragging phone cords into pantry closets for increased privacy. Recent data of adolescent after-hour communication might be surprising to many parents and practitioners. One study of 615 adolescents (Picard, 2007) found that one in four youths communicated electronically with their dating partner hourly between midnight and 5 a.m.; one in six (17%) communicated 10 or more times. In this same study, half of the parents reported that they were in control of how much their children communicated using technology devices; however, only 28% of parents and 18% of adolescents reported actual parental limits on adolescents’ use. Another study reported similar findings: 23% of parents supervised adolescents’ Internet use (Mishna, Khoury-Kassabri, Gadalla, & Daciuk, 2012).

Advances in communication technology provide modern adolescents with increased autonomy compared to youths of the past and have challenged parents’ ability to use positive parenting practices. Compromised positive parenting practices, such as inadequate parental monitoring, have a robust impact on problem behaviors throughout the period of adolescence (Steinberg, 2001), even after controlling for adolescent influences on parenting (Williams & Steinberg, 2011). Parents struggling with an inability to effectively monitor their teen may resort to using creative and potentially dishonest tactics (e.g., hidden GPS tracking, requesting text message transcripts from mobile phone companies). Strategies for practitioners include encouraging age-appropriate limits on communication devices as well as balancing parental control (knowing where youth are and who they are with) with adolescent desires for autonomy. Other strategies include working to establish community norms that support parents by imposing reasonable limits and establishing guidelines for a large number of peers, thereby changing perceived norms among youth.

Adolescents’ relationships with their friends and school peers have also been impacted by technology. One area that has been of historical concern is bullying, which may be facilitated by different forms of communication and access of information. A large study of just fewer than 2,200 diverse middle and high school students revealed that a significant amount of bullying behavior takes place virtually (Mishna et al., 2012). Over half of the students participated in cyber bullying: 24% were victimized, 8% were bullying, and 26% were both victimized and bullying in the past 3 months. Interestingly, youth who reported involvement with cyber-bullying also reported spending more hours a day on the computer. Older adolescents were more likely to engage in cyber-bullying over traditional bullying, supporting developmentally appropriate strategies to prevent cyber-bullying.

Using technology to enact aggressive behaviors has also impacted adolescent dating relationships. A topic of considerable interest is how dating violence, particularly psychological abuse, has been facilitated by the use of new technologies. One review reported that one-third of adolescents experience excessive partner monitoring and control (checking via mobile phone 10 to 30 times a day to find out where the partner is and who they are with), and 25% experience insults and harassments through mobile phone calls, texts, or social networking sites (Offenhauer &
Buchalter, 2011). This is particularly problematic because dating abuse is often made private and kept hidden. On the other hand, some adolescents also use technology in public contexts to damage their dating partners’ friendships or reputation (i.e., relational violence). For example, adolescents have posted information on networking sites against a partner, shared private photos or videos, or used technology to threaten physical harm. Rates of adolescent “sexting” range from 4% to 19% (sent) and 13% to 31% (received), with a greater proportion of girls sending than boys, and are often shared without consent (Offenhauer & Buchalter, 2011).

In addition to growing concerns about how technology impacts dating violence, technology has also changed the way that dating itself occurs. Adolescents are able to initiate and establish relationships on social networking sites and often rely on these to determine their relationship status (i.e., when they are “FBO” or Facebook official). Adolescent dating itself has evolved to be more fluid and less prescribed, relying less on labels of the past (e.g., going steady, boyfriend/girlfriend). It is important for practitioners to attend to the way that adolescents describe their relationships and less on labels to understand the meaning of the relationship and associated roles/power struggles. Language barriers often divide adolescents from adults, as adults may misinterpret the level of seriousness of a relationship or potential red flags. For example, “friends with benefits” relationships are not atypical in adolescence, yet they include a range of sexual behaviors that may be limited to “making-out” (Williams & Adams, 2013). Further, they sometimes include aspects of intimacy and commitment traditionally found in “boyfriend/girlfriend” relationships. We advise that practitioners become familiar with how adolescents talk about their relationships in order to incorporate accurate and relevant treatment strategies.

**IF WE ONLY KNEW**

Important changes in brain development and technological advances impact the way in which adolescents process and respond to information, behave, and relate to others. Consequently, myriad factors play into the well-being of every adolescent. While it is important for practitioners to stay current on research advancements on adolescent development, it is equally important to understand the local language of the individual adolescent experience. In addition to the rapid proliferation of ideas, there is often a considerable divide between what adults, including well-meaning practitioners, think they know about the adolescent experience and the actual lived adolescent experience. Generational differences are also a part of the digital divide (APA, 2009) and can have an impact on challenges associated with understanding the younger generation. Several interesting studies from the adolescent perspective suggest a lived experience that differs considerably from what adults surmise from outside the adolescent world (Boyd, 2007; Ito et al., 2010). Indeed, one study of parental knowledge of the risk behaviors of middle school students concluded that parents are largely “clueless” (Young & Zimmerman, 1989). In response to differences in technology use, some recommendations are beginning to emerge about how to better reach adolescents through technology-infused interventions (National Institute on Drug Abuse [NIDA], 2010).

The research we discussed gives some explanation of specific ways in which these worlds are different and what we as practitioners and researchers can do to understand the adolescent world. Interestingly, a W.T. Grant study found that those adults who spent the most time with adolescents tended to have the most empathetic perspective (Aubrun & Grady, 2000). Those spending the most time with adolescents, thus, share a responsibility in shaping more positive images of the adolescent experience. While the media portray the extremes of highly aggressive and highly heroic adolescent figures, most adolescents live somewhere in the middle and have a relatively normative experience full of highs and lows. Better understanding of the developing adolescent holds great potential in enhancing the health and well-being of all adolescents.
REFERENCES


