

# Friending, IMing, and Hanging Out Face-to-Face: Overlap in Adolescents' Online and Offline Social Networks

Stephanie M. Reich  
University of California, Irvine

Kaveri Subrahmanyam  
California State University, Los Angeles, and Children's  
Digital Media Center @ Los Angeles

Guadalupe Espinoza  
University of California, Los Angeles, and Children's Digital Media Center @ Los Angeles

Many new and important developmental issues are encountered during adolescence, which is also a time when Internet use becomes increasingly popular. Studies have shown that adolescents are using these online spaces to address developmental issues, especially needs for intimacy and connection to others. Online communication with its potential for interacting with unknown others, may put teens at increased risk. Two hundred and fifty-one high school students completed an in-person survey, and 126 of these completed an additional online questionnaire about how and why they use the Internet, their activities on social networking sites (e.g., Facebook, MySpace) and their reasons for participation, and how they perceive these online spaces to impact their friendships. To examine the extent of overlap between online and offline friends, participants were asked to list the names of their top interaction partners offline and online (Facebook and instant messaging). Results reveal that adolescents mainly use social networking sites to connect with others, in particular with people known from offline contexts. While adolescents report little monitoring by their parents, there was no evidence that teens are putting themselves at risk by interacting with unknown others. Instead, adolescents seem to use the Internet, especially social networking sites, to connect with known others. While the study found moderate overlap between teens' closest online and offline friends, the patterns suggest that adolescents use online contexts to strengthen offline relationships.

*Keywords:* social networking sites, instant messaging, intimacy, MySpace, Facebook

Adolescence is a period of tremendous change—biological, psychological, and social—and teens must learn to adjust to their changing bodies and emerging needs as well as to their new skills, roles, and responsibilities (Christie & Viner, 2005; Peterson, 1988). Adolescents have to adjust to their developing sexuality, formulate a coherent identity, become independent and autonomous, and develop intimate relationships with peers and romantic partners (Adams & Berzonsky, 2003; Erikson, 1963). Adolescence is also a time when peers become increasingly important, and research suggests that peers help teens

cope with these developmental tasks (Berndt & Savin-Williams, 1993; Connolly, Furman, & Konarski, 2000; Johnson & Aries, 1983; Kallen, Stephenson, & Doughty, 1983; Ward, 2004). Since the arrival of the Internet and other communication tools such as social networking sites (e.g., MySpace, Facebook), it has become clear that adolescents spend large amounts of time online with peers (Lenhart, Purcell, Smith, & Zickuhr, 2010), and communication with peers is in fact the most popular use of technology among youth (Subrahmanyam & Greenfield, 2008).

Research also suggests that adolescents use their time within online spaces (e.g., bulletin boards, chat rooms, blogs, and instant messaging) to deal with the issues in their lives, including sexuality (Suzuki & Calzo, 2004), identity (Subrahmanyam, Smahel, & Greenfield, 2006), and partner selection (Smahel & Subrahmanyam, 2007). To further understand the connection between adolescent development and the Internet, this article focuses on adolescents' use of online social networking sites in the service of promoting and maintaining intimacy. Additionally, it explores with whom teens interact by assessing the relation between teens' offline (face-to-face) and online (social networking sites and instant messaging) social networks. A unique feature of this article is its diverse, primarily Latino sample; given the sparse research on Internet use by minority youth, the study results can enhance our understanding of the developmental implications of Internet use among these adolescents.

---

*Editor's Note.* Jacquelynne S. Eccles served as the action editor for this article.—JSE

---

Stephanie M. Reich, Department of Education, University of California, Irvine; Kaveri Subrahmanyam, Department of Psychology, California State University, Los Angeles and Children's Digital Media Center @ Los Angeles; Guadalupe Espinoza, Department of Psychology, University of California, Los Angeles and Children's Digital Media Center @ Los Angeles.

We thank the following students at the Media and Language Lab at CalStateLA for their assistance: Vanessa Beauchesne, Roy Cheng, Cheryl Groskopf, Tatevik Natanyan, Ricardo Sandoval, Angie Shu-Sha Guan, Nina Tran, and Kim Zhu.

Correspondence concerning this article should be addressed to Stephanie M. Reich, University of California, Irvine, 3200 Education, Irvine, CA 92697-5500. E-mail: smreich@uci.edu

## Prevalence and Popularity of the Internet

Findings from the 2009 Pew Internet & American Life Project, a random digit-dialing survey of 800 adolescents between the ages of 12 and 17 years, revealed that 93% of teens in the United States use the Internet. Of these, 73% reported having a social networking profile (Lenhart et al., 2010). Compared with the 2006 prevalence rate of 55% for use of social networking sites, this represents a rapid increase in adolescents' use of sites such as MySpace and Facebook. The 2006 Pew Internet & American Life Project also reported that 77% of 12- to 17-year-old teens have sent or received an instant message (Lenhart & Madden, 2007). A 2010 Kaiser Family Foundation report revealed that although youth Internet access has become relatively high across all ethnic groups, minorities continue to access it at lower rates (74% among Latinos, 78% among African Americans) than do European Americans (88%). In addition, minority (African American and Latino) youth are more likely to use their cell phone to access the Internet and other media content compared with European American youth (Rideout, Foehr, & Roberts, 2010).

Although research suggests that many youth are on social networking sites, there is little understanding of what adolescents do within them, in particular, whom they interact with and the impact of their online social networking activities on their online and offline relationships. This is in large part because the bulk of extant research has focused on college-age youth rather than younger users. Furthermore, although teens report having large numbers of "friends" on social networking sites, they may, in actuality, only interact with a smaller portion of this vast network (Thelwell, 2008). As yet, research has not addressed how these closer online groups (i.e., comprising those they interact with most) relate to adolescents' offline social networks. Thus, our aim in this article was to address these gaps in the understanding of what teens do on social networking sites, with whom and why.

## The Internet as a Setting for Addressing Developmental Needs

In exploring adolescents' use of the Internet, we take the view that young people's online and offline worlds are psychologically connected (Subrahmanyam, Reich, Waechter, & Espinoza, 2008; Subrahmanyam & Smahel, 2011) and that they use these newer forms of technology in the service of important developmental needs such as sexuality, intimacy, increasing autonomy, and identity exploration (e.g., Christie & Viner, 2005; Erikson, 1959, 1963). Extant research suggests that different media forms have different features (e.g., extent of anonymity, ability to upload audio and visual information) that can be used to address offline developmental tasks (Subrahmanyam & Smahel, 2011). Consequently, the ways in which adolescents use a media form and the reasons they do so are likely to be more important than the details of the platform or technology alone. This study focused specifically on intimacy and how teens use social networking sites to connect with their peers.

## Intimacy and the Internet

Establishing intimacy and emotional connection with others is an important developmental task during adolescence (Shulman,

Laursen, Kalman, & Karpovsky, 1997), and research suggests that youth use the Internet for connecting with friends, supporting and cultivating emotional ties, and sometimes creating new relationships (Lenhart et al., 2010; Lenhart & Madden, 2007). Because interactions that occur via a screen often lack face-to-face cues such as gestures, gaze, voice, and other body language cues, online communication may be less rich than traditional face-to-face interactions. Online contexts also allow users to interact with much larger numbers of people than offline contexts. Thus, it is possible that the opportunity to interact with a variety of people, in a potentially less personal way, may provide fewer opportunities for more intimate interactions and consequently interfere with the development of close connections. Researchers have found support for both positive and detrimental influences of Internet use on teens' personal relationships. For example, in looking at how Internet activities influence close face-to-face relationships, Blais, Craig, Pepler, and Connolly (2008) found that social media involving direct interactions, such as instant messaging, increased adolescents' reported intimacy, trust, commitment, and communication with their best friend 1 year later while less social or anonymous platforms, such as chat rooms, were associated with increased alienation and conflict and decreased intimacy and companionship over time. Furthermore, teens who reported using the Internet primarily for entertainment purposes experienced declines in commitment, intimacy, and companionship in close friendships and romantic relationships (Blais et al., 2008). These results suggest that depending on their characteristics, online activities may support or detract from offline relationships.

When looking at the effect of instant messaging on Dutch adolescents' relationship quality over time, Valkenburg and Peter (2009a) found that personal disclosures through instant messaging were related to increases in friendship quality 1 year later. Using a similar sample, the same research group also found that 88% of teens reported using the Internet to maintain existing friendship networks, and almost a third felt that it was a more effective way to communicate intimate information than offline means (Valkenburg & Peter, 2007). Similarly, Desjarlais and Willoughby's (2010) longitudinal study of friendship quality found that teens who used computers with friends or engaged in more online chatting had increases in friendship quality over time. Other researchers also have found that adolescents often use the Internet to stay in touch with close friends (e.g., Gross, 2004) and that for adults and youth, use of the Internet does not reduce one's likelihood of calling or meeting offline friends in person (Bargh & McKenna, 2004). While computer-mediated interactions have been shown experimentally to be less intimate than face-to-face (or voice-to-voice) contact (Cummings, Butler, & Kraut, 2002), these interactions offer another context to interact with others and, when used to connect with friends from offline settings, may even strengthen existing offline relationships (Valkenburg & Peter, 2009b).

Together these studies suggest that online applications such as instant messaging and social networking sites may provide additional ways for teens to interact with each other in their search for intimacy and emotional connection. Although extant research suggests that teens are heavy users of these online communication tools, less is known about the specific activities that they engage in and the reasons for these behaviors. Instead, most research on adolescent online use is descriptive of adolescents' activities,

without a developmental perspective. Furthermore, on surveys, teens self-report that they mostly communicate online with friends they already know, but there remain questions about the identity of teens' frequent online partners—whether they know and interact with them offline or whether they are people they know and interact with in online contexts only. Of particular concern is whether teens are interacting with people they know solely from online contexts and, if so, whether such cyber friendships reduce or strengthen feelings of intimacy.

### Intimacy and Unknown Others

The increasing popularity of social networking sites may be changing the way adolescents interact with one another as well as increasing teens' contact with people they would not normally encounter in their daily life. This has led some researchers, parents, and policy makers to question the identities of those with whom teens are interacting online and, more important, whether such online contexts may be putting adolescents at risk by encouraging communication with strangers versus known others. These concerns have been fueled by news stories about online incidents in which adult men solicited sex from young girls (e.g., Kreiser, 2006; Wortham, 2009) and an adult woman pretended to be a teenage boy and contributed to the suicide of a 13-year-old girl (Associated Press, 2008).

Additional concerns about privacy and risk have led to the identification of "risky" online behaviors such as providing personal information on one's profile (e.g., full name, phone number, class schedule) and engaging in flirtatious behavior (e.g., seeking out strangers, "winking," "poking"). Hinduja and Patchin (2008) examined the amount of personal information that adolescents provide on social networking sites and found that although pictures were common, very few adolescents posted their full name, phone number, or e-mail address. However, in looking at the use of privacy settings among high school and college age users, researchers have found that most adolescents (70%-80%) allow their social networking site profile to be public and searchable (Fogel & Nehmad, 2009; Lewis, Kaufman, & Christakis, 2008). To date, little has been known about those whom teens connect with online and whether teens' online communication partners are known from offline social settings. No study to date has compared the overlap of teens' specific friends across online and offline contexts, although a prior study has compared the overlap between offline and online networks among college students (see Subrahmanyam et al., 2008). In addition, concerns arise about whether teens are visiting online spaces without adult supervision. Although a high percentage of parents report having rules regarding the types of sites their teens are allowed to visit, few parents take more proactive techniques for monitoring Internet use (Mesch & Talmud, 2006).

In considering with whom adolescents interact online and whether they are known from offline contexts, an additional aim of this article is to determine what proportion of adolescents' online networks is known to them offline and to what degree teens' closest face-to-face and online friends overlap. By exploring the closest relationships, we could differentiate regular and frequent contact from contact with online friends that is more rare and infrequent. Also, by comparing names across online and offline networks, we could match partners across contexts, rather than rely on self-reported estimations of overlap between networks. In ad-

dition, by studying why teens create profiles, the types of activities they engage in while online, and whether their online use is monitored by parents, we could assess whether high school students appear to engage in risky online behaviors.

### Latino Internet Use

Research over the past few decades has identified differences in the access and use of technology across different ethnic and income groups, a trend referred to as the *digital divide* (Warschauer, 2004). In recent years, the access gap has narrowed, but as we pointed out earlier, there remain differences in how minority youth access the Internet, which online applications they use, and the media content that they consume (Lopez & Livingston, 2010; Valadez & Duran, 2007; Watkins, 2010). As a result, researchers recently have begun to explore how minority adolescents use online spaces such as social networking sites and instant messaging (Lopez & Livingston, 2010) in the service of core developmental process such as identity formation and presentation (e.g., Tynes, Garcia, Giang, & Coleman, 2010; Tynes, Giang, & Thompson, 2008).

With regard to Latino youth, early research suggested that compared with European Americans, they were more likely to use MySpace (Hargittai, 2008; Subrahmanyam et al., 2008) rather than Facebook. But to date, little has been known about their specific activities online and how their peer networks from face-to-face settings connect with their online networks. Exploring with whom Latino teens interact online and the degree of overlap between their closest online and offline peers is interesting given that Latinos are often viewed as having a more collectivist orientation (Coon & Kimmelmeier, 2001; Raeff, Greenfield, & Quiroz, 2000) and theorized to be more connected to relatives than are their European American peers (Sanchez & Reyes, 1999). While recent conceptualizations of culture acknowledge the presence of some independence and interdependence in all societies (Oyesman, Coon, & Kimmelmeier, 2002), Latinos have historically been viewed as placing greater value on family interdependence (Raeff, 2010). Therefore, it is possible that due to a greater sense of familism (Sabogal, Marín, Otero-Sabogal, Marín, & Perez-Stable, 1987), Latino teens use social networking sites to stay connected to relatives and that the people they interact with most online and face-to-face are also relatives. Our ethnically diverse sample enabled us to compare how uses of social networking sites and peer networks may differ for Latino adolescents in comparison to European American peers.

In order to understand what youth do online and how those behaviors relate to the emerging developmental task of establishing intimacy with others, it is important to examine young people's activities within particular online communication platforms. We addressed this in the present study by asking adolescents detailed questions about their general online use as well as their activities on online social networking sites such as MySpace and Facebook. Additionally, to date, there has been no research comparing adolescents' interaction with specific partners in face-to-face and online contexts (Facebook and via instant messaging). To explore the relation between adolescents' offline and online social networks, we (a) compared adolescents' most frequent social partners on social networking sites, instant messaging, and face-to-face contexts, (b) examined the quality and intensity of these online and

offline relationships, (c) examined where the adolescents typically spent the most time with these different friends and whether they used different contexts (face-to-face, social networking, and instant messaging) to interact with the same or different people, and (d) explored whether the reasons for use and types of social partners differed between Latino and European American teens. Studying more than one online setting helped to illuminate whether teens use different online platforms to interact with different people and hence diversify and widen their social networks or whether they use different online forums to interact with the same people and consequently strengthen and bolster their social networks. On the basis of previous research showing that adolescents and emerging adults' online and offline worlds are connected (Subrahmanyam et al., 2008; Subrahmanyam & Smahel, 2011), we expected that adolescents' online and offline networks would show a fair, although not perfect, amount of overlap.

**Method**

This survey study of teens' online activities and peer networks involved a two-part data collection method (in-person and online), with open-ended and forced-choice questions. Through these two data collection episodes, adolescents were asked about themselves, their close relationships, and their daily activities. Additionally, more detailed questions regarding use of a social networking site (SNS) were asked, such as participants' reasons for having a profile, their frequent activities on SNSs, how they decide to add or delete friends, and their perceptions about the effects of their SNS use on their relationships. Participants who did not use an SNS were asked whether they perceived any effects on their other relationships as a result of not using these sites and to describe these effects. Furthermore, the adolescent respondents were asked to name up to 10 people (first and last names) with whom they interacted the most in person, on a SNS, and via instant messaging. From these data, we made contingency tables of names (2 × 2 × 2) for each person to assess the degree of overlap between online (instant messaging and SNS) and offline (face-to-face) networks. All open-ended responses were coded by the first author into themes. Then, themes and accompanying participant responses were reviewed by the other two authors for agreement. The three authors had 100% agreement on the coding of responses by themes.

**Participants**

Participants were 251 adolescents from three high schools in Southern California who took part in this study in late 2007 and early 2008. Students ranged in age from 13 to 19 years ( $M = 16.3$ ,  $SD = 1.2$ ), and slightly more than half were female (59%). Participants were predominately Latino (70%), followed by European American (20%), multi-ethnic (6%), Asian (1%), African American (1%), and other (2%). See Table 1 for details.

**Procedure**

Researchers visited the high schools several days before the data collection episode to describe the study to students whose classroom teachers had agreed to participate in our study; we distributed parental/guardian informed consent and student assent forms

Table 1  
*Demographic Characteristics of Participants*

Characteristic	N (%)
Gender	
Females	149 (59%)
Males	102 (41%)
Age <sup>a</sup>	
13 years	1 (0.5%)
14 years	21 (8.5%)
15 years	29 (12%)
16 years	76 (31%)
17 years	77 (31%)
18 years	41 (16%)
19 years	2 (1%)
Missing data	4 (2%)
Year in school	
Freshman	27 (11%)
Sophomore	31 (12%)
Junior	104 (42%)
Senior	83 (33%)
Missing data	6 (2%)
Race/ethnicity	
Latino	176 (70%)
European American	49 (20%)
African American	3 (1%)
Asian	3 (1%)
Native American/Pacific Islander	2 (1%)
Multiracial	15 (6%)
Other	3 (1%)
Instant messaging account	162 (65%)
Social networking site	220 (88%)
MySpace	205 (94%)
Facebook	4 (2%)
Youtube	4 (2%)
Other	4 (2%)

<sup>a</sup> Mean age of participants = 16.3 years ( $SD = 1.2$ ).

to all who indicated they were interested in participating. Upon returning, the researchers collected the consent forms and explained the purpose of the study to those students who received parent/guardian consent to participate. The researchers explained the students' rights for participating in this research study and obtained written assent from all participants. A university institutional review board approved these study activities, and participants were given a \$5 gift card for their participation. The in-person survey took 20–30 min to complete, and the online survey took between 15–20 min to complete.

**Part 1: In-person survey.**

**Background and online activities.** Participants were asked to complete a paper-and-pencil survey during school time. In this survey, developed by the authors and used in previous research with college students (Subrahmanyam et al., 2008), participants were asked to provide background characteristics and describe their use of SNSs such as MySpace and Facebook. Questions about SNS use focused on typical activities on these sites, motives for using them, how participants decided whom to interact with on these sites, and whether their profiles had in any way impacted their relations with friends and family. Participants who did not have a social networking profile were asked whether they visited SNSs and also how they felt about not having an account.

In the in-person survey, participants were also asked about their offline peer networks. Specifically, teens were asked to list up to



10 people with whom they spend the most time in face-to-face (FTF) settings. They were asked to list the first and last names of these people as well as other information about them including their gender and age, place of interaction (i.e., in school or out of school), and whether or not the person was a relative. In addition, they were also asked about the quality (how good a friend) and intensity (how often they interacted with the individual) of their relationship with the person as well as whether the individual had a social networking profile and instant messenger screen name.

At the end of the survey, participants were informed that they would receive a link via e-mail for the online survey and were reminded to complete the survey before they went to bed.

**Internet use of in-person sample.** All of the teens completing the in-person survey were regular Internet users. Two hundred twenty-six (90%) respondents reported having e-mail accounts, 162 (65%) reported using instant messaging, and 220 (88%) had at least one profile on a social networking site. Of the 12% who did not have an SNS profile, almost half (43%) reported visiting these sites frequently. There were no significant differences by gender, ethnicity, or age in the use of instant messaging (IM) and SNSs. Of those with an SNS profile, most participants' accounts were hosted by MySpace (93%,  $n = 204$ ). The number of SNS profiles per participant ranged from one to seven, with 78% reporting having only one profile ( $M = 1.3$ ,  $SD = 0.83$ ).

**Phase 2: Online survey.** In the evening of the same day that they completed the in-person survey, participants were e-mailed a link to an online survey. In this survey, also used in Subrahmanyam et al. (2008), participants were asked about their daily online and offline activities, their SNS activities that day, and the people they interacted with the most via IM and on SNS. Similar to the procedure used in the in-person survey, participants were asked to list up to 10 people with whom they interacted the most through IM and on SNSs (e.g., MySpace and Facebook). In addition to the names, participants provided information about their friends' age, gender, and their relationship to them. Between the in-person and online surveys, participants provided the names of up to 30 people with whom they interacted most in offline and online contexts (i.e., face-to-face, IM, and SNS). To increase the accuracy of their responses, participants were encouraged to open their SNS profile and IM accounts (if they had them) while completing the survey.

The online survey had a lower response rate than the in-person survey; all of the 126 participants who completed the online survey reported using the Internet regularly (although this was not an eligibility requirement for participation), and 87% reported being online that day, prior to logging on for the online survey. In comparing the online and offline survey samples, teens who completed the online survey reported spending more time online,  $\chi^2(1, 247) = 3.56$ ,  $p = .03$ , being online more frequently,  $\chi^2(1, N = 218) = 3.85$ ,  $p = .001$ , and using IM more often,  $\chi^2(1, N = 246) = 12.69$ ,  $p < .001$ .

When asked about the amount of time spent on different online activities, teens from the online survey reported that they spent the most time on SNSs, followed by web surfing. Table 2 lists the amount of time participants reported spending on online activities on the day of the survey. Surprisingly, only 9% of respondents played games online (although 59% played games offline). When totaling all online activities, our participants reported on average that they spent 5.2 hr ( $SD = 3.6$ ) online that day. However, this

number may be inflated if the participants were multitasking (i.e., using multiple forms of media at once), which past research suggests is likely among this age group (Jeong & Fishbein, 2008). SNS use was frequent, and most of our participants (67%) reported checking their SNS profile at least every 2–3 days, with many (44%) checking it more than once a day.

**Two-part survey.** The use of a two-step survey process has several advantages. The in-person survey allowed for verification of age and gender, which is typically not possible with online surveys. The online portion of the survey enabled participants to answer detailed questions about their social networking and IM use by checking their profiles online, rather than relying on memory or making inaccurate guesses, a problem encountered in previous survey studies of online activity (Subrahmanyam & Lin, 2007).

In both the online and offline surveys, participants were asked specific questions about their time use that day—how much time they spent offline, online, and on SNS specifically as well as the activities in which they had engaged that day. Using two different formats allowed us to ask respondents what they usually did on SNSs (in-person survey) and what they actually did on a particular day (online survey). Such a procedure provides a snapshot of participants' actual SNS use on a given day in addition to their recollections of what they typically do on these sites.

**Calculating online/offline overlap.** On the in-person survey, participants were asked to list up to 10 people they interacted with most in person; on the online survey, they were asked to list up to 10 people they interacted with most on SNSs and up to 10 people they interacted most with on IM. If a person named the same 10 people in all three contexts (i.e., face-to-face, SNS and IM), then only 10 names were counted. If there were no overlaps across these three contexts, then the participant would have provided up to 30 names. However, if a participant did not use SNS or IM or listed fewer than 10 friends in each context, then the number of names could be less than 10. On average, participants named 14 people with a range of between four and 27 people across all three social contexts (IM, SNS, and FTF).

To determine the degree of overlap of friends that adolescents interacted with most online and offline, we constructed  $2 \times 2 \times 2$  contingency tables for each respondent (see Table 3 for details). With this, we were able to calculate the percentage of overlap across these three networks (e.g., the percentage of SNS friends who were also FTF friends but not IM friends). The cells in each table provided an index of overlap per context that could then be used for subsequent analyses. The Venn diagram in Figure 1 is a pictorial representation of how each cell of the  $2 \times 2 \times 2$  contingency table was calculated, and Table 3 describes each cell in the contingency table. For instance, the area of F is the overlap between friends on SNS and IM that are not FTF friends, whereas the area of G + F represents the total number of friends on IM and SNS. The area of G represents the total number of friend in all three contexts (FTF, IM, and SNS).

To assess which participant characteristics and behaviors predict overlap between these three peer networks, we used ordinary least square (OLS) regression analyses in which the dependent variables were overlap between networks—percentage overlap between SNS and FTF, IM and FTF, SNS and IM, online (SNS or IM) and offline (FTF)—and among all three (SNS, IM, and FTF). Predictor variables included participant age, ethnicity, gender, time online

Table 2  
Time Spent on Different Online Activities on the Day of the Survey

How much time did you spend on the following activities?	None	< 30 min.	1 hr	2–3 hr	> 4 hr
Browsing websites (for academic and nonacademic purposes)	18 (19%)	38 (40%)	25 (26%)	8 (9%)	6 (6%)
Chat rooms	83 (87%)	8 (9%)	3 (3%)	1 (1%)	0
Downloading music (iTunes)	37 (39%)	27 (28%)	19 (19%)	10 (11%)	3 (3%)
E-mail	8 (9%)	70 (74%)	14 (14%)	3 (3%)	0
Friendship/social networking sites (MySpace, Facebook, Friendster)	35 (37%)	34 (36%)	17 (18%)	6 (6%)	3 (3%)
Instant messaging (AIM, MSN, Yahoo! Messenger)	57 (60%)	21 (22%)	8 (9%)	5 (5%)	4 (4%)
Online games (MMORPGS like Worlds of Warcraft)	86 (91%)	5 (5%)	3 (3%)	1 (1%)	0
Posting, reading and commenting on blogs (Livejournal, Xanga)	69 (73%)	22 (23%)	3 (3%)	1 (1%)	0

Note.  $n = 95$ . Values = number of participants; parentheses = percentage of participants; MMORPGS = massively multiplayer online role-playing game.

(total and by type of activity), use of SNS or IM (dichotomous), reasons for using SNS, reasons for adding friends on SNS, activities on SNS (e.g., adding, blocking, posting comments, winking), and frequency of going online. Additional logistic regressions were performed to explore possible predictors of IM and SNS use, and chi-square analyses were performed to determine if gender or age differences existed in IM and SNS use.

To determine whether differences exist between Latino and European American teens beyond ethnicity as a predictor variable in the analyses described previously, we performed additional OLS regressions with the number of relatives named as friends as a dependent variable as well as percentage of networks (SNS, IM, FTF) that contain relatives as friends. The same independent variables described in the previous paragraph were used. Also, to determine whether unique patterns existed for Latino teens' online use and peer network overlap, we performed the analyses described previously on a subset of the sample containing only Latino participants.

## Results

### Intimacy on the Internet

When participants were asked their reasons for having a profile on a SNS, the majority noted social motives such as "to stay in touch with friends I do not see often" (84%) and "to stay in touch with relatives" (52%; see Figure 2). In listing the various SNS activities that they engaged in often, participants mostly reported social activities. For instance, "read/respond to comments on my page/posts on my wall" was the first and second most common activity on SNS (see Figure 2). Table 4 describes participants' frequent online activities.

**Perceived impact on relationships.** To assess perceptions regarding the effect of SNS use on relationships, we asked participants whether their SNS use had influenced their relationships in any way and whether they had ever needed to delete or block a friend from their SNS profile. Participants provided open-ended responses about the types of problems and solutions, and these answers were coded for themes by each of the authors. Some of the participants reported that their SNS use had made no difference to their relationships (44%), whereas others felt it had made their friendships closer (43%). When asked if their SNS use had ever caused trouble, a quarter of the participants noted that their SNS activities had caused them problems. The nature of these problems

tended to be around rumors ("because of this one rumor about me"), conflict ("they weren't on my top 8"), profile security ("ex-friend hacked in and changed everything to bad stuff"), parental knowledge of activities ("I posted bad things, and my parent found out I did bad things"), and infidelity (either suspected: "A lot of guys commenting on my pictures and my ex got mad" or actual: "My chick found out I was cheating on her with one of my friends"). Nineteen percent of the teens felt that an SNS had fixed a problem by offering such things as a protected space to "talk" ("It's easier to talk to some people on the computer when it's safe"), evidence that disproved a rumor or suspected infidelity ("It provides proof of what people say"), and a platform for friendship and romantic relationship maintenance ("When my girl left to Mexico we kept in touch" [through MySpace]).

**Friends or acquaintances?** Teens reported having large friendship networks ranging from 0 to 793 friends (one person had opened an SNS account but had not added any one yet); however, median size of friendship networks were more moderate (median = 130,  $M = 176$ ,  $SD = 166$ ). When asked to look at their SNS profile and determine how many of the friends listed in their profile they interacted with frequently in FTF settings, participants' most common response was 100, (range = 0–250 friends,  $M = 57.7$ ,  $SD = 59$ ). When comparing the modal number of friends that teens interacted with in-person in light of the typical size of their network, it appears that adolescents reported interacting frequently with more than three quarters of their SNS friend network (77%).

In looking specifically at the people that adolescents reported interacting with the most on SNSs, almost all were viewed as friends. Only 1% of the people teens listed as interacting with most often were described as "just someone I talk to," and 68% were described as "very good friends." In looking at IM, less than 1% of the people that teens reported interacting with the most were acquaintances ("just someone I talk to"), whereas 66% were "very good friends." There were no significant differences in the level of closeness reported by males and females, Latinos and European Americans, or young and older participants (all  $ps > .38$ ).

Participants were also asked where they spent the most time with their top friends in the three different contexts. Teens reported that they spent the most time with their IM friends in or out of school ( $M = 91\%$  of friends,  $SD = 0.19$ ). That means that the teens in our study mostly IM with peers they know and interact with in FTF contexts—since the majority of respondents had none

Table 3  
Contingency Table Created for Each Participant and Letter Corresponding to Figure 1 Venn Diagram

Use social networking site (SNS)	Face-to-face friends (FTF)		Not face-to-face friends (Not FTF)	
	Do instant message (IM)	Do not instant message (no IM)	Do instant message (IM)	Do not instant message (no IM)
Yes	FTF who use SNS and IM (use all three) G	FTF who use SNS but no IM E	Not FTF who use SNS and IM F	Not FTF who use SNS but no IM (C SNS only) F + C
No	FTF who do not use SNS but IM D	Only FTF (do not use SNS and no IM) A	Not FTF who do not use SNS but do IM (B IM only) B	Not FTF who do not use SNS or IM — B
Total	FTF who IM G + D	FTF who do not IM E + A	Not FTF who IM F + B	Not FTF who do not IM C
		FTF A + D + E + G		Not FTF B + C + F
		Total G + E		Total F + C

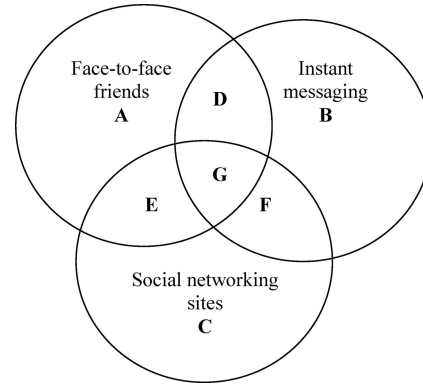


Figure 1. Pictorial representation of the overlap of instant messaging, social networking, and face-to-face friends.

or only one listed friend whom they described as someone they “meet only online.” A similar pattern was found with the friends listed for SNSs. On average, the teens in our study interacted with 95% of their listed SNS friends in FTF contexts ( $SD = 0.11$ ), with only 5% described as people that they meet only online.

**Risky behaviors online.** In looking at SNS behaviors that may be risky, we found that few of the respondents reported using their real name for their profile (29%). Instead, teens often used nicknames (42%) or other names (15%), such as lyrics from a favorite song, abbreviated versions of their real (and too long) name, terms that reflected their mood, or names their current or previous boyfriend/girlfriend had picked for them. Less commonly, teens used the default name given by the site (2%) or names that their friends had chosen for them (2%). Moreover, selecting a name to attract others was uncommon, with only 2% of respondents listing this as a reason.

The in-person survey showed that teens were somewhat selective with regard to those they allowed to view their SNS profile. When questioned about whom they decide to add as an SNS friend, most respondents reported selecting people who were FTF friends (36%) or a friend of a friend (42%). A few (15%) reported that they would accept anyone who asked, especially if they looked cool (additional 7%).

When asked about flirtatious behaviors on SNSs, such as winking and poking—features on SNSs that enable a user to send a generic message (“You have been poked by \_\_\_”) that is typically viewed as friendly or flirtatious by others (Whitty, 2004)—respondents described these activities as infrequent, with only 9% of online survey respondents having winked or poked an online friend on the day of the survey. When reporting about frequent activities on SNS, no respondents selected winking or poking as a frequent activity.

**Monitoring.** Although the teen participants reported that they did not often provide their full name on their sites, when asked whether their parents monitored their SNS profile most teens responded that they did not. Only 9% reported that their parent or guardian monitored their SNS use. However, 73% of respondents reported that while their parent/guardian did not monitor the account, they knew about their teens’ SNS use. Only one participant admitted to having one profile for his/her parents to view and another profile that the parents did not know about.

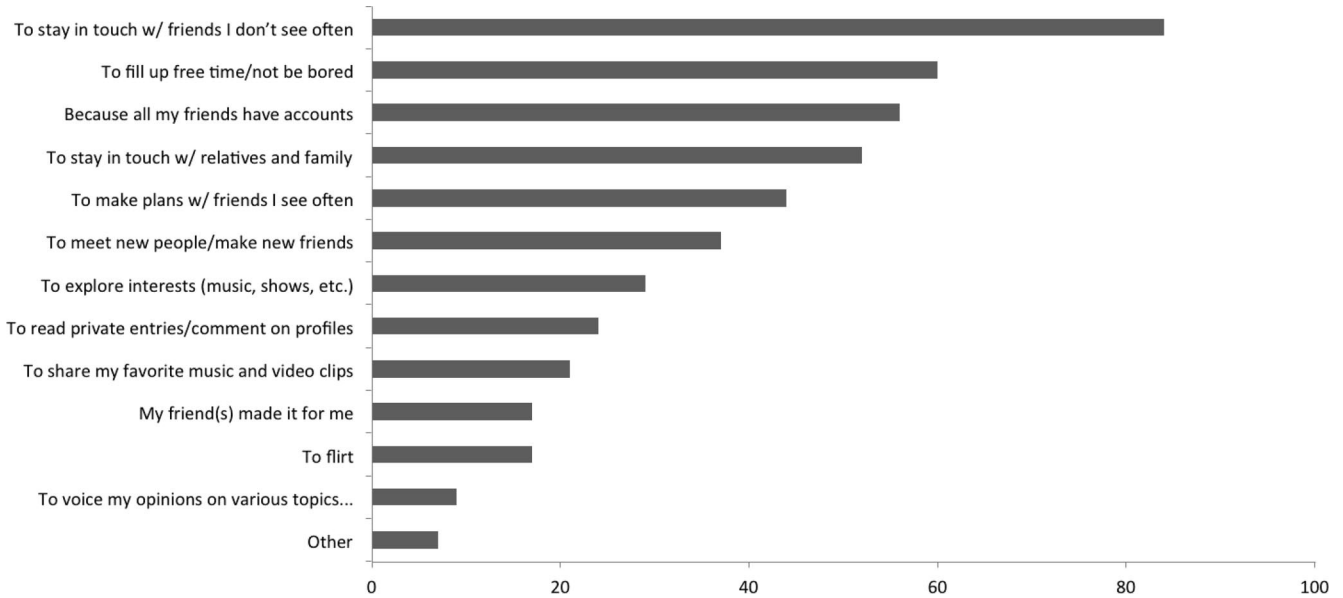


Figure 2. Percentage of respondents listing each reason for using social networking sites (n = 220).

**Using IM and SNS**

Many of the online survey respondents (53%) reported using both IM and SNS. Female participants were significantly more likely to use both IM and SNS than male participants,  $\chi^2(1, N = 67) = 9.3, p = .002$ , and those teens who reported spending more time online were also more likely to have an IM account,  $\beta = .05, t(104) = 3.6, p < .001$ , and to use both IM and SNSs,  $\beta = .05, t(105) = 3.09, p = .001$ . Furthermore, those adolescents who reported that their main reason for using SNSs was “because all my friends have an account” were significantly more likely use both SNSs and IM,  $\beta = .20, t(99) = 2.26, p = .02$ .

**Overlap**

One of the primary aims in this study was to determine with whom teens are interacting online and whether their online and

offline networks overlap. To assess this, we compared the people described by participants as those with whom they spent the most time on SNSs, IM, and FTF. For these three contexts, overlap ranged from 0% to 100%, with an average of 7% ( $SD = 0.11$ ) complete overlap among all three networks; that is, on average 7% of participants listed the same friends on IM, SNSs, and FTF. In looking at how offline (FTF) friends overlap with online (i.e., IM or SNS) friends, on average 58% ( $SD = 25$ ) of the FTF friends listed for each participant were also named as friends on SNS, IM, or both. Of all the friends named across all three contexts, about a third (35%,  $SD = 0.21$ ) overlapped in two or all three areas (i.e., IM and SNS; IM and FTF; SNS and FTF; or IM, SNS, and FTF). Among those who used both IM and SNS, on average 18% had complete overlap for some of their friends on FTF, IM, and SNS (i.e., 18% of participants had some friends named across all three networks).

Table 4  
Top Three Activities on Social Networking Site

Activity	Most often (n = 163)	2nd most often (n = 161)	3rd most often (n = 159)
Read/respond to comments on my page/posts on my wall	<b>66 (41%)</b>	<b>36 (22%)</b>	12 (7%)
Send/respond to messages/invites	41 (25%)	22 (13.5%)	18 (11%)
Edit my profile and update my status	21 (13%)	12 (8%)	<b>22 (14%)</b>
Browse my friends' profiles/walls/pages	12 (7%)	13 (8%)	17 (11%)
Change profile picture	7 (4%)	11 (7%)	17 (11%)
Listen to/find new music	6 (4%)	11 (7%)	20 (13%)
Write comments on other peoples' page/wall	5 (3%)	28 (17%)	23 (14%)
Look for the profiles of people I know or used to know	3 (2%)	11 (7%)	11 (7%)
Post/tag pictures	2 (1%)	2 (1%)	6 (4%)
Look for new friends, send friend requests, and add friends	0	10 (6%)	10 (6%)
Change my "Top 8"	0	4 (3%)	3 (2%)
Create/visit groups to talk about specific topics	0	1 (0.5%)	0
Wink, poke, give "e-props" or kudos	0	0	0

Note. Boldface type indicates the most frequent responses.



In looking at the number of people named, participants listed more FTF friends ( $M = 8.8$ ,  $SD = 2.2$ ) than SNS ( $M = 5.9$ ,  $SD = 3.7$ ) or IM ( $M = 2.9$ ,  $SD = 3.7$ ) friends. For the FTF friends listed, 48% of the respondents had no overlap between these friends and those people listed from online contexts. However, when online friends were listed, most respondents had some overlap with other networks. Specifically, of those who listed the names of SNS friends, only 17% of respondents had no overlap between their SNS friends and those from another context (FTF or IM). On average, 65% of teens' SNS friends were also named as friends on IM, FTF, or both ( $SD = 0.27$ ). Of those who listed IM friends, only 6% had no overlap between any of their IM friends and friends from SNS or FTF. On average, 69% of respondents' IM friends overlapped with friends from SNS, FTF, or both ( $SD = 0.3$ ). Thus, adolescents may interact with their FTF friends exclusively in person or through online contexts as well. While almost half of their FTF friends are met only offline, the other half are frequent online partners on IM and SNS. However, close online friends are often close FTF friends as almost all respondents reported having some overlap between their online and FTF friends. Teens also seem to interact in multiple online spaces with these friends, with the majority of these online friends overlapping on IM and SNS.

### Predicting Overlap

After assessing the degree of overlap between online and offline friends, we attempted to identify respondent characteristics and online and offline activities and behaviors that were predictive of overlap between these friend networks. Surprisingly, in looking at what might distinguish those with more online–offline overlap in close friends, few of the variables from this study were predictive. Ethnicity, activities online, purposes for using SNS, and activities on SNS were unrelated to the amount of overlap (all  $ps > 0.21$ ). Only a few significant predictors were identified. In regard to the connections between IM and FTF friends, those participants who reported spending more time online (irrespective of the type of activity) had more overlap between IM and FTF friends,  $\beta = .03$ ,  $t(103) = 3.03$ ,  $p = .02$ . Interestingly, those who reported spending more time using IM tended to have less overlap between their SNS and FTF friends,  $\beta = -.05$ ,  $t(105) = -2.45$ ,  $p = .02$ . Teens who reported adding anyone who sends a request,  $\beta = .27$ ,  $t(63) = 2.38$ ,  $p = .01$ , and those who had not previously blocked someone from their SNS,  $\beta = -.12$ ,  $t(63) = -1.72$ ,  $p = .04$ , had more overlap between their IM and FTF friends. However, these predictors did not account for much variance in IM and FTF overlap,  $R^2 = .18$ ,  $F(3, 63) = 4.46$ ,  $p = .007$ . Surprisingly, those teens who reported that they “will only add a person whom I have met in person” to their SNS friend list had less overlap between their SNS and FTF friends,  $\beta = -.17$ ,  $t(63) = -2.22$ ,  $p = .03$ . While there were no gender differences in the amount of overlap between IM and FTF friends, females had greater overlap between their SNS and FTF friends than males did,  $t(65) = 2.57$ ,  $p = .01$ , with 42% overlap on average. On the whole, teens tended to interact online with people they knew from offline contexts; however, predicting why there was or was not overlap among the closest friends in these networks is difficult.

### Ethnicity and Online Activities and Overlaps

Given that the respondents for this study were largely Latino and less is known about their specific online behaviors (Lopez & Livingston, 2010), we explored whether differences existed in regard to whom Latino teens interacted with most online and whether activities online and reasons for using SNSs predicted overlap specifically for this group.

In comparing whether Latino adolescents interacted more with relatives than European American teens, we found no differences. In large part, few of the respondents named relatives as the people they interacted with the most in any network (FTF, IM, or SNS). Only 29 of the 126 teens who completed the online survey named a relative as a friend, and ethnicity was not predictive in the cases of these 29 people.

To explore potential predictors of overlap between online and offline networks for Latino adolescents specifically, we repeated analyses for a subset of the data that included only Latino respondents. Similar to the full sample, for Latinos, the amount of time spent online,  $\beta = .02$ ,  $t(59) = 2.82$ ,  $p = .006$ , and on IM specifically,  $\beta = .06$ ,  $t(59) = -3.9$ ,  $p = .001$ , was predictive of overlap between IM and FTF friends. None of the reasons for having a profile or frequent activities online was predictive of overlap in friends across online and offline contexts.

### Discussion

Results from this study demonstrate that adolescents use SNS, a popular online space, to address important developmental needs for intimacy and connection to others. While there is much concern over children's safety within these online spaces, our data provide little evidence that teens are putting themselves at risk when interacting with others online via these sites.

### Intimacy

The most common online activities among the participants in our study tended to be social in nature, such as using e-mail and SNSs rather than gaming or watching videos. The reasons for using SNSs and the common activities on these sites were also highly social. Moreover, results suggest that adolescents tended to interact online with people known from their offline contexts. Many youth perceived that their SNS use had impacted their relationships with friends, from making them closer to causing or fixing problems. Our findings indicate that adolescents use these online spaces to connect to others and perhaps strengthen their offline relationships. They are consistent with previous survey data on college students that have shown that emerging adults' use of the Internet is predominately social in nature, typically with people known from offline contexts (Lampe, Ellison, & Steinfeld, 2007; Subrahmanyam & Greenfield, 2008).

Research exploring emotional connections online has also supported the notion that such online interactions can support emotional intimacy. For instance, a review of the content of e-mail messages found online interactions to provide social support to users (Tichon & Shapiro, 2003). Similarly, Mesch and Talmud (2006) found evidence that online relationships were strengthened with more use and more similarities between users and their online friends. In a study of chat room use, Shaw and Grant (2002) found

that chat room use decreased participants' feelings of loneliness and depression while increasing perceptions of social support. In exploring online interactions with offline friends, Livingstone (2008) in a qualitative study of adolescent SNS users found that posts and messages provided a way to keep in touch and sustain a "constant connection with peers" (p. 404). Similarly, Reich's (2010) mixed-method study of community on SNSs revealed that youth use these spaces to share important information and stay connected to others. While the bulk of research on Internet use and intimacy with friends has focused on college-age samples, our findings and the few studies that have targeted adolescents suggest that teens also primarily use online spaces such as SNSs to connect with their offline friends and to strengthen their existing relationships.

An interesting feature of online social networking use is that it enables users to interact with a wider network of people than is possible in FTF contexts. Our participants reported a mean of 176 and median of 130 social networking friends. This ability to use newer online tools to interact with a wider circle of friends may actually be very beneficial for adolescents. On the basis of an analysis of handwritten messages in high school yearbooks, Giordano (1995) suggested that interactions with more remote peers may help teens learn about themselves and their social world. A wider network of friends on online networks could similarly be valuable—for instance, online contexts might present an alternative, and less threatening, forum for younger adolescents who are still learning to negotiate interactions with members of the opposite sex (Subrahmanyam & Smahel, 2011). Although all members of this large network of friends were not considered for the overlap analysis of the friends with whom participants most interacted, we did ask participants about the proportion of their SNS friends with whom they interacted frequently in person. The modal response was three quarters of their SNS friend network (77%), a relatively high number. Perhaps adolescents use social networking tools to maintain ties with a wider group of friends using short and brief interaction episodes. In future research, investigators should examine how the newer online communication tools are mediating adolescents' interactions with their close and more distant peers and consequently transforming notions about adolescent friendships and intimacy.

## Risk

Although the popular media, parents, and policy makers have voiced concern over Internet safety, our survey did not find evidence that teens engage in the online behaviors that have been identified as high risk by the Pew Internet & American Life Project (Lenhart & Madden, 2007) and others. Instead, teens appeared to be selective about whom they added as friends, did not provide their full name on their profile, and used these SNSs to interact with known others. Flirty behaviors such as winking and poking were uncommon, and social activities that involved interactions with potential strangers (e.g., "Create/visit groups to talk about specific topics") were rare. Mostly, the adolescents in our study seemed to use these spaces to interact with people from their known, offline worlds.

## Overlaps Between Online and Offline Friends

As predicted, we found that there was overlap between our participants' offline and online social networks. Most of their online partners were from their offline worlds. Our results are contrary to the widespread concern that social networking activities may be putting teens at risk for increased interaction with strangers. The overlap in social networks was by no means complete: On average, FTF networks were larger, and the respondents in our study interacted only online with a subset of these friends. Conversely, of the friends listed from an online setting (IM or SNS), most overlapped with friends listed from the other online or FTF setting. Respondents also reported that the friends they spent the most time with online and offline were very good friends whom they saw most often in-person (in or out of school). While we hoped to find ways to predict why adolescents' online and offline peer networks overlap, we found few variables that were predictive. Instead, we found moderate levels of overlap between online and offline friends. Even so, almost all of the friends that were listed from online contexts were also described as friends with whom teens interacted most in FTF settings (rather than those that they met only online).

Our results suggest that adolescents may be using online tools to diversify their existing offline friendships. They use them to interact online with some of their FTF friends, but other FTF friends remain offline. These findings are in line with those of the recent Pew Internet & American Life Project survey of adult social networking site users, which showed that 50% of individuals in adults' FTF social networks are also "friends" on Facebook (Hampton, Goulet, Rainie, & Purcell, 2011). Thus, it is possible that just as adults' closest friends at work are often not the same people they spend time with when not at work, teens may also be developing multifaceted relationships that occur to different extents in different contexts. These results are similar to our previous findings with college students who also had moderate overlap between friends named from online and offline contexts, though almost all were known from offline settings (Subrahmanyam et al., 2008). What we do not know is whether closeness and intimacy vary by how and where teens interact most with their friends or by the length of time interacting online—which other studies have suggested is important (Desjarlais & Willoughby, 2010). In the future, researchers should examine whether friends are viewed with different levels of closeness depending on where (IM, SNS, or FTF settings) most of their interactions with them occur.

## Latino Teens

A unique feature of this study was having a largely Latino sample, which enabled us to examine whether activities, behaviors, and peer networks are different for this group of adolescents. Similar to other studies of urban (Zhao, 2009) and Latino (boyd, in press) teens, participants in our sample tended to use MySpace as their social networking site of preference. While Patchin and Hinduja's (2010) analysis of randomly sampled MySpace pages found that many profiles had been abandoned 1 year later, this is unlikely for Latino teens. Rather work by Hargittai (2008) suggests that youth gravitate to sites where they know other users, and a recent comparison of MySpace profiles from 2007 to 2010 revealed an increased use of MySpace for Latinos (Wilkinson & Thelwell, 2010).

In exploring whether Latinos, a group historically viewed as more culturally interdependent (Raef, 2010), interacted more frequently with relatives than their European American peers, we found no difference. Instances of teens naming relatives as friends with whom they interacted often either online (SNS or IM) or offline were uncommon for both groups. Additionally, when using a subset of the data containing only Latino participants, we did not find any unique predictors of overlap in friendship networks. Instead, Latino teens and non-Latino teens appeared to use online spaces in similar ways to diversify their friendship networks (Subrahmanyam et al., 2008). In line with Greenfield's (2009) theory of social change, it is possible that online connections to others, such as those provided through SNSs, could contribute to diminishing feelings of familism and increasing individualization for Latino teens. This possibility should be explored in future research.

### Limitations

While we did not find differences between Latino and European American teens' types of friends or reasons for overlap across networks, this does not mean that differences do not exist. It is possible that having participants name up to 10 friends per network was not sufficient to capture differences in network composition. Perhaps generational status also might matter, but we were not able to assess this possibility, as we did not collect data on the immigrant status of participants and their parents. Last, we may not have had sufficient power to detect differences, as only 20% of the sample was European American. In future research, a greater number of friends in online and offline peer networks should be studied and a larger and more ethnically balanced sample should be used.

This study of what teens do online, why they do it, and whom they interact with identified some interesting ways in which adolescents use online spaces to address developmental needs for intimacy. While the study was strengthened by the use of both an online and offline survey procedure, it did suffer from a low response rate for the online portion. This lower completion rate of the online survey limited our ability to compare data from both sources and yielded a smaller sample, reducing our power to identify potential predictors of overlap in the sample. While our predominately Latino sample provided data on a typically under-represented group in technology and Internet research, the small number of European Americans minimized our ability to compare Latino and European American adolescents. Further, these findings may not be generalizable to other high school populations in nonurban settings. Nonetheless, this study does provide initial insights into the online activities of a typically understudied group.

This survey study relied on self-report and therefore is susceptible to errors of recollection and social desirability. While our method enabled us to compare those people with whom teens interacted most, we did not compare total online and offline networks. Unlike other online surveys, this study was strengthened by the use of both in-person and online surveys. In future research, investigators should explore friendships beyond the 10 closest friends and perhaps gather and verify information on the total SNS friend list. Additionally, observing what youth do online, rather than using self-report, would generate additional information about how teens navigate the Internet and their responses to interactions with others online.

### Conclusions and Implications

Adolescents spend much of their free time online (Lenhart & Madden, 2007), and many of their online activities are social in nature (Lampe et al., 2007). Teens use IM, e-mail, and SNSs to connect with others, and in our study, these others were known from offline contexts. Contrary to concerns about Internet safety, these data did not show that teens engage in high-risk behaviors. Instead, they connect to people they know from offline contexts, are selective about what personal information they post on their profiles, and infrequently engage in flirtatious and stranger-seeking behaviors online. Adolescents seem to use the Internet, especially SNSs, to support the development of intimacy and connection to others. Our study suggests that online uses support the development of adolescents and does not seem to place them at increased risk.

### References

- Adams, G., & Berzonsky, M. (2003). *Blackwell handbook of adolescence*. Oxford, England: Blackwell.
- Associated Press. (2008, May 15). *Mom indicted in MySpace suicide case: Computer charges against woman whose daughter feuded with victim*. Retrieved from <http://www.msnbc.msn.com/id/24652422/>
- Bargh, J. A., & McKenna, K. (2004). The Internet and social life. *Annual Review of Psychology*, 55, 573–590. doi:10.1146/annurev.psych.55.090902.141922
- Berndt, T. J., & Savin-Williams, R. C. (1993). Peer relations and friendships. In P. H. Tolan & B. J. Kohler (Eds.), *Handbook of clinical research and practice with adolescents* (pp. 203–219). Oxford, England: Wiley.
- Blais, J., Craig, W., Pepler, D., & Connolly, J. (2008). Adolescents online: The importance of Internet activity choices to salient relationships. *Journal of Youth and Adolescence*, 37, 522–536. doi:10.1007/s10964-007-9262-7
- boyd, d. (in press). White flight in networked publics? How race and class shaped American teen engagement with MySpace and Facebook. In L. Nakamura & P. Chow-White (Eds.), *Digital race anthology*. London, England: Routledge.
- Christie, D., & Viner, R. (2005). ABC of adolescence: Adolescent development. *British Medical Journal*, 330, 301–304. doi:10.1136/bmj.330.7486.301
- Connolly, J., Furman, W., & Konarski, R. (2000). The role of peers in the emergence of heterosexual romantic relationships in adolescence. *Child Development*, 71, 1395–1408. doi:10.1111/1467-8624.00235
- Coon, H. M., & Kemmelmeier, M. (2001). Cultural orientations in the United States: (Re)Examining differences among ethnic groups. *Journal of Cross-Cultural Psychology*, 32, 348–364. doi:10.1177/0022022101032003006
- Cummings, J., Butler, B., & Kraut, R. (2002). The quality of online social relationships. *Communications of the ACM*, 45, 103–108. doi:10.1145/514236.514242
- Desjarlais, M., & Willoughby, T. (2010). A longitudinal study of the relation between adolescent boys and girls' computer use with friends and friendship quality: Support for the social compensation or the rich-get-richer hypothesis? *Computers in Human Behavior*, 26, 896–905. doi:10.1016/j.chb.2010.02.004
- Erikson, E. (1959). *Identity and the life cycle*. New York, NY: Norton.
- Erikson, E. (1963). *Childhood and Society*. New York, NY: Norton.
- Fogel, J., & Nehmad, E. (2009). Internet social network communities: Risk taking, trust, and privacy concerns. *Computers in Human Behavior*, 25, 153–160. doi:10.1016/j.chb.2008.08.006
- Giordano, P. C. (1995). The wider circle of friends in adolescence. *The American Journal of Sociology*, 101, 661–697.



- Greenfield, P. (2009). Linking social change and developmental change: Shifting pathways of human development. *Developmental Psychology, 45*, 401–418. doi:10.1037/a0014726
- Gross, E. (2004). Adolescent Internet use: What we expect, what teens report. *Applied Developmental Psychology, 25*, 633–649. doi:10.1016/j.appdev.2004.09.005
- Hampton, K. N., Goulet, L., Rainie, L., & Purcell, K. (2011). *Social networking sites and our lives: How people's trust, personal relationships, and civic and political involvement are connected to their use of social networking sites and other technologies*. Washington, DC: Pew Internet & American Life Project.
- Hargittai, E. (2008). Whose space? Differences between users and non-users on social networking sites. *Journal of Computer Mediated Communication, 13*, 276–297. doi:10.1111/j.1083-6101.2007.00396.x
- Hinduja, S., & Patchin, J. (2008). Personal information of adolescents on the Internet: A quantitative content analysis of MySpace. *Journal of Adolescence, 31*, 125–146. doi:10.1016/j.adolescence.2007.05.004
- Jeong, S.-H., & Fishbein, M. (2008). Predictors of multitasking with media: Media factors and audience factors. *Media Psychology, 10*, 364–384. doi:10.1080/15213260701532948
- Johnson, F. L., & Aries, E. J. (1983). Conversational patterns among same-sex pairs of late-adolescent close friends. *Journal of Genetic Psychology, 142*, 225–238.
- Kallen, D. J., Stephenson, J. J., & Doughty, A. (1983). The need to know: Recalled adolescent sources of sexual and contraceptive information and sexual behavior. *Journal of Sex Research, 19*, 137–159. doi:10.1080/00224498309551175
- Kreiser, K. (2009, February 11). MySpace: Your kids' danger? Retrieved from CBS Nightly News website: <http://www.cbsnews.com/stories/2006/02/06/eveningnews/main1286130.shtml>
- Lampe, C., Ellison, N., & Steinfeld, C. (2007). *A Face(book) in the crowd: Social searching vs. social browsing*. In M. B. Rosson & D. Gilmore (Eds.), *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 435–444). New York, NY: Association for Computing Machinery. doi:10.1145/1240624.1240626
- Lenhart, A., & Madden, M. (2007). Social networking websites and teens: An overview. Retrieved from the Pew Internet & American Life Project website: <http://www.pewinternet.org/Reports/2007/Social-Networking-Websites-and-Teens/Data-Memo.asp>
- Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media & mobile Internet use among teens and young adults*. Washington, DC: Pew Internet & American Life Project.
- Lewis, K., Kaufman, J., & Christakis, N. (2008). The taste for privacy: An analysis of college student privacy settings in an online social network. *Journal of Computer Mediated Communication, 14*, 79–100. doi:10.1111/j.1083-6101.2008.01432.x
- Livingstone, S. (2008). Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy, and self-expression. *New Media & Society, 10*, 393–411. doi:10.1177/1461444803005002001
- Lopez, M. H., & Livingston, G. (2010). *How young Latinos communicate with friends in the digital age*. Washington, DC: Pew Hispanic Center.
- Mesch, G., & Talmud, I. (2006). The quality of online and offline relationships: The role of multiplexity and duration of social relationships. *The Information Society, 22*, 137–148. doi:10.1080/01972240600677805
- Oyesman, D., Coon, H., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin, 129*, 3–72. doi:10.1037//0033-2909.128.1.3
- Patchin, J. W., & Hinduja, S. (2010). Trends in online social networking: Adolescent use of MySpace over time. *New Media & Society, 12*, 197–216. doi:10.1177/1461444809341857
- Peterson, A. (1988). Adolescent development. *Annual Review of Psychology, 39*, 583–607. doi:10.1146/annurev.ps.39.020188.003055
- Raeff, C. (2010). Independence and interdependence in children's developmental experiences. *Child Development Perspectives, 4*, 31–36. doi:10.1111/j.1750-8606.2009.00113.x
- Raeff, C., Greenfield, P. M., & Quiroz, B. (2000). Conceptualizing interpersonal relationships in the cultural contexts of individualism and collectivism. *New Directions for Child and Adolescent Development, 2000*, 59–74. doi:10.1002/cd.23220008706
- Reich, S. M. (2010). Adolescents' sense of community on MySpace and Facebook: A mixed-methods approach. *Journal of Community Psychology, 38*, 688–705. doi:10.1002/jcop.20389
- Rideout, V., Foehr, U. G., & Roberts, D. (2010). *Generation M2: Media in the lives of 8- to 18-year-olds*. Menlo Park, CA: Kaiser Family Foundation.
- Sabogal, F., Marin, G., Otero-Sabogal, R., Marin, B. V., & Perez-Stable, E. J. (1987). Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences, 9*, 397–412. doi:10.1177/07399863870094003
- Sanchez, B., & Reyes, O. (1999). Descriptive profile of the mentorship relationships of Latino adolescents. *Journal of Community Psychology, 27*, 299–302. doi:10.1002/(SICI)1520-6629(199905)27:3
- Shaw, L. H., & Grant, L. M. (2002). In defense of the Internet: The relationship between Internet communication and depression, loneliness, self-esteem, and perceived social support. *CyberPsychology and Behavior, 5*, 157–171. doi:10.1089/109493102753770552
- Shulman, S., Laursen, B., Kalman, Z., & Karpovsky, S. (1997). Adolescent intimacy revisited. *Journal of Youth and Adolescence, 26*, 597–617. doi:10.1023/A:1024586006966
- Smahel, D., & Subrahmanyam, K. (2007). "Any girls want to chat press 911": Partner selection in monitored and unmonitored teen chat rooms. *CyberPsychology & Behavior, 10*, 346–353. doi:10.1089/cpb.2006.9945
- Subrahmanyam, K., & Greenfield, P. M. (2008). Communicating online: Adolescent relationships and the media. *The Future of Children, 18*, 119–146. doi:10.1353/foc.0.0006
- Subrahmanyam, K., & Lin, G. (2007). Adolescents on the Net: Internet use and well-being. *Adolescence, 42*, 659–677. Retrieved from [http://www.cdmc.ucla.edu/KS\\_Media\\_biblio\\_files/kaveri\\_lin\\_2007.pdf](http://www.cdmc.ucla.edu/KS_Media_biblio_files/kaveri_lin_2007.pdf)
- Subrahmanyam, K., Reich, S. M., Waechter, N., & Espinoza, G. (2008). Online and offline social networks: Use of social networking sites by emerging adults. *Journal of Applied Developmental Psychology, 29*, 420–433. doi:10.1016/j.appdev.2008.07.003
- Subrahmanyam, K., & Smahel, D. (2011). *Adolescents' digital worlds*. New York, NY: Springer.
- Subrahmanyam, K., Smahel, D., & Greenfield, P. M. (2006). Connecting developmental constructions to the Internet: Identity presentation and sexual exploration in online teen chat rooms. *Developmental Psychology, 42*, 395–406. doi:10.1037/0012-1649.42.3.395
- Suzuki, L. K., & Calzo, J. P. (2004). The search for peer advice in cyberspace: An examination of online teen bulletin boards about health and sexuality. *Journal of Applied Developmental Psychology, 25*, 685–698. doi:10.1016/j.appdev.2004.09.002
- Thelwell, M. (2008). Social networks, gender and friending: An analysis of MySpace member profiles. *Journal of the American Society for Information Science and Technology, 59*, 1321–1330. doi:10.1002/asi.v59:8
- Tichon, J., & Shapiro, M. (2003). With a little help from my friends: Children, the Internet, and social support. *Journal of Technology in Human Services, 21*, 73–92. doi:10.1300/J017v21n04\_05
- Tynes, B., Garcia, E., Giang, M., & Coleman, N. (2010). The racial landscape of social network sites: Forging identity, community, and civic engagement. *I/S: A Journal of Law and Policy for the Information Society, 7*, 1–30.
- Tynes, B., Giang, M., & Thompson, G. (2008). Ethnic identity, intergroup contact, and outgroup orientation among diverse groups of adolescents on the Internet. *CyberPsychology & Behavior, 11*, 459–465. doi:10.1089/cpb.2007.0085



- Valadez, J., & Duran, R. (2007). Redefining the digital divide: Beyond access to computers and the Internet. *The High School Journal, 90*, 31–44.
- Valkenburg, P., & Peter, J. (2007). Preadolescents' and adolescents' online communication and their closeness to friends. *Developmental Psychology, 43*, 267–277. doi:10.1037/0012-1649.43.2.267
- Valkenburg, P., & Peter, J. (2009a). The effects of instant messaging on the quality of adolescents' existing friendships: A longitudinal study. *Journal of Communication, 59*, 79–97. doi:10.1111/j.1460-2466.2008.01405.x
- Valkenburg, P., & Peter, J. (2009b). Social consequences of the Internet for adolescents: A decade of research. *Current Directions in Psychological Science, 18*, 1–5. doi:10.1111/j.1467-8721.2009.01595.x
- Ward, L. M. (2004, March). *And TV makes three: Comparing contributions of parents, peers, and the media to sexual socialization*. Paper presented at the Society for Research in Adolescence, Baltimore, MD.
- Warschauer, M. (2004). *Technology and social inclusion: Rethinking the digital divide*. Boston, MA: MIT Press.
- Watkins, S. (2010). *Changing the conversation: Rethinking America's digital divide*. Retrieved April 27, 2011, from <http://www.theyoungandthedigital.com/mobile/changing-the-conversation-rethinking-americas-digital-divide/>
- Whitty, M. (2004). Cyber-flirting: An examination of men's and women's flirting behaviour both offline and on the Internet. *Behaviour Change, 21*, 115–126. doi:10.1375/behc.21.2.115.55423
- Wilkinson, D., & Thelwell, M. (2010). Social network site changes over time: The case of MySpace. *Journal of the American Society for Information Science and Technology, 61*, 2311–2323. doi:10.1002/asi.21397
- Wortham, J. (2009, July 9). MySpace turns over 90,000 names of registered sex offenders. *The New York Times*. Retrieved from <http://www.nytimes.com/2009/02/04/technology/internet/04myspace.html>
- Zhao, S. (2009). Teen adoption of MySpace and IM: Inner-city versus suburban differences. *CyberPsychology & Behavior, 12*, 55–58. doi:10.1089/cpb.2008.0090

Received July 9, 2010

Revision received November 21, 2011

Accepted December 5, 2011 ■