

# College Students' Use of Communication Technology with Parents: Comparisons Between Two Cohorts in 2009 and 2011

Meagan A. Ramsey, MS,<sup>1</sup> Amy L. Gentzler, PhD,<sup>1</sup> Jennifer N. Morey, PhD,<sup>1</sup>  
Ann M. Oberhauser, PhD,<sup>2</sup> and David Westerman, PhD<sup>3</sup>

## Abstract

Although communication technology is beneficial to maintain important close relationships, not all findings suggest that communication technology use between college students and their parents is indicative of positive adjustment or relational qualities. A study in 2009 found that only 24.2% of college students used a social networking site (SNS) to communicate with a parent, yet those students reported more loneliness, anxious attachment, and conflict with their parent (Gentzler et al., 2011). Because technology and trends in use change rapidly, we investigated a new cohort of college students 2 years later to determine if rates of using communication technology with parents and their links to student adjustment have changed. Comparisons between 2009 and 2011 samples indicated that in-person contact and telephone use did not vary across cohorts. However, texting and SNS use with parents became more common, and using e-mail with parents declined. Consistent with the 2009 data, students' phone use with parents was related to positive relationship qualities (satisfaction, intimacy, support, instrumental aid). In the new 2011 sample, e-mail was linked to aid. However, the present findings indicate students' SNS use with parents is no longer linked to maladaptive outcomes. The study highlights how quickly the use and implications of communication technology changes, and suggests that communication patterns may reflect broader psychosocial adjustment and parent-child dynamics.

## Introduction

WHEN STUDENTS LEAVE HOME to attend college, staying connected to parents is very beneficial.<sup>1</sup> Various forms of communication technology provide college students with fast and easy ways of staying connected to family who are separated by long distances. Previous research indicates that students and parents are making good use of the available technology, with students and parents communicating about 13 times a week on average.<sup>2</sup> However, there is a growing concern that some communication patterns may signify maladaptive outcomes for college students.<sup>3</sup> Due to the varied findings and because communication technology is rapidly changing, the goal of this paper is to examine the implications of parents and students' means of communication. Specifically, we investigated how college students' use of common communication channels (i.e., telephone, texting, social networking sites (SNS), and e-mail) with parents are associated with their adjustment and relationships with their parents,

and if the current findings differ from those with an earlier cohort 2 years prior.<sup>3</sup>

## Communication Technology Over Time

Technology is constantly evolving and bringing us new ways to communicate with others. As a result, the usage rates for the different forms of communication are also quickly changing. For example, the Pew Internet and American Life Project found that approximately 49% of American adults used e-mail to communicate in 2000–2001, but this jumped to approximately 67% of adults in 2008–2009. In addition, they found that only about 5% of adults used a SNS in 2000–2001, but this increased to about 37% in 2008–2009.<sup>4</sup> Not only are people using more forms of media, but they are using particular forms of media more often. The Pew Internet and American Life Project also found that the average number of text messages sent and received per day for adults increased from about 30 text messages daily in September of 2009 to

<sup>1</sup>Department of Psychology, West Virginia University, Morgantown, West Virginia.

<sup>2</sup>Department of Geography, West Virginia University, Morgantown, West Virginia.

<sup>3</sup>Department of Communication Studies, West Virginia University, Morgantown, West Virginia.

about 40 text messages daily in May of 2010.<sup>5</sup> Due to these high rates of change over a short period of time, it is necessary to track changes in the implications of using communication technology, especially as newer forms of communication become easier to access and more mainstream. Although there has been increasing interest in how people use the Internet and other forms of communication technology to meet their personal and interpersonal needs,<sup>6,7</sup> very little research has focused on the parent–child relationship, a critically important relationship across the lifespan.

### College Students and Parents' Use of Communication Technology and Associations

The introduction of new technology and ease of use and access to this technology has changed the way college students and parents communicate. Hofer has labeled communication technology an "electronic tether" where students may be choosing to communicate with their parents more frequently and parents may be using technology to monitor their college-student children closely.<sup>8</sup> Moreover, these changing communication patterns may influence student outcomes. For example, students who have very frequent contact with their parents during the college years are less autonomous during this period in which they should be making more of their own decisions and gaining independence from parents.<sup>2</sup> However, too little use of communication technology with family may also signify student adjustment difficulties. Specifically, students who are lonely may perceive themselves to have fewer friends or less satisfying relationships than they want,<sup>9</sup> and it has been found that those who are lonelier use electronic communication less frequently within existing relationships.<sup>10,11</sup>

In addition to student adjustment, communication between college students and parents is also likely to vary by attachment.<sup>3,12</sup> Attachment bonds first develop between infants and their parents, although people need to have attachment figures throughout their lives.<sup>13</sup> The type of attachment that a person develops has been shown to have profound effects on that individual's later regulatory abilities and capacity for healthy future relationships. People who develop a more secure attachment (i.e., who received consistent and warm responses from early caregivers) tend to develop adaptive ways of managing distress, such as seeking support from close others.<sup>14</sup> As shown in a recent meta-analysis, students' attachment to parents predicts college student adjustment in that greater security is linked to both positive feelings about the self and more adaptive relationships with others.<sup>15</sup> In contrast, people characterized by more anxious attachment have difficulty with perceived unavailability of their attachment figures and have more conflicting close relationships, whereas people characterized by more avoidant attachment value independence and limit intimacy within their close relationships.<sup>14</sup> In addition to attachment, parent–student communication also may vary based on other indicators of parent–student relationship quality such as satisfaction, support, intimacy, instrumental aid, and conflict.<sup>3</sup>

### The Current Study

Earlier research from a 2009 sample found that only 24.2% of college students used a SNS with a parent, yet those who

did reported more loneliness, anxious attachment, and conflict within their relationship with the parent than students who did not use a SNS with their parent. In contrast, more frequent telephone communication with the parent was associated with reports of greater relationship satisfaction, intimacy, support and aid, even when controlling for other forms of communication.<sup>3</sup> Because technology and trends in use change rapidly, we investigated a new cohort of college students 2 years later in the spring semester of 2011 to determine if (a) rates of technology use with parents changed across that time, and (b) the links between communication technology frequency and college students' reported loneliness, attachment, and parental relationship quality changed at the 2011 assessment from earlier found associations.

### Method

#### Participants

In the 2011 sample, 216 college students (171 females, 45 males) aged 18–22 ( $M=19.52$ ,  $SD=1.08$ ) participated in this study. These students came from a larger sample of 302 students. We excluded 22 subjects over the age of 22 due to expectations that they may differ in their use of communication technology and their reliance on parents. Additionally, only students who identified a parent (180 mothers, 36 fathers) as their closest family member were included in the analyses. Students who identified a sibling or family member other than their parent as closest ( $N=64$ ) were excluded. Students who identified a parent versus a nonparent as their closest family member did not differ significantly in age, gender, ethnicity, loneliness, attachment style, or most relationship qualities (satisfaction, intimacy, conflict). However, students who identified a parent as closest rated them higher in support ( $t(267)=2.75$ ,  $p<0.001$ ) and instrumental aid ( $t(267)=3.92$ ,  $p=0.01$ ) compared to students who identified a nonparent family member as closest. The racial/ethnic distribution of the sample was 93% Caucasian, 3% African-American, 1% Native American, 1% Hispanic, 1% Asian, and 1% other.

The sample size and characteristics of the current sample are very similar to the previous 2009 comparison sample.<sup>3</sup> The cohorts did not differ in age, gender, ethnicity, loneliness, attachment, or most relationship qualities (satisfaction, intimacy, aid, conflict). The samples only differed in parental support ( $t(422)=-0.62$ ,  $p=0.04$ ), with the 2011 sample giving higher support ratings.

#### Procedure

All participants were students in general psychology classes who received extra credit for participation. Surveys were completed online. Participants identified the family member they were closest to and answered questions about their communication and relationship with this family member. Participants also answered similar questions about their best friend and romantic partner that are not addressed in the present paper.

#### Measures

Use of communication technology. Participants rated their frequency of using four forms of communication technology (phone, e-mail, text message, SNS) as well as their

in-person contact with the identified parent on an 8-point scale, where 0 = "never", 1 = "few times a year", 2 = "once a month", 3 = "few times a month", 4 = "once a week", 5 = "few times a week", 6 = "for a short period of time each day", and 7 = "several hours a day."

University of California Los Angeles (UCLA) Loneliness Scale.<sup>16</sup> This 20-item scale provided a measure of how lonely participants were (e.g., "I feel left out," "No one really knows me well"). Participants rated all items on a 4-point Likert scale ranging from 1 = "never" to 4 = "often". All items were summed to create a loneliness score ( $\alpha = 0.93$ ).

Experiences in Close Relationships-Revised (ECR-R).<sup>17,18</sup> This 36-item survey provided indexes of participants' levels of avoidant and anxious attachment. Items were rated on a 7-point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree." An example item for avoidant attachment style ( $\alpha = 0.95$ ) was "I prefer not to be too close to romantic partners." An example item for anxious attachment style ( $\alpha = 0.94$ ) was "I often worry that my partner will not want to stay with me."

Network of Relationship Inventory (NRI).<sup>19</sup> Participants completed five scales of the Network of Relationships Inventory, which provided indexes of participants' relationship satisfaction, intimacy, support, instrumental aid, and conflict with their identified parent. Each scale consisted of three items. Participants rated all 15 items on a 5-point Likert scale ranging from 1 = "little to none" to 5 = "the most." Reliability was demonstrated for the subscales; Cronbach's alpha was 0.93 for relationship satisfaction (e.g., "How satisfied are you with your relationship with your closest family member?"), 0.88 for intimacy (e.g., "How much do you share your secrets and private feelings with your closest family member?"), 0.87 for support (e.g., "How much do you turn to your closest family member for support with personal problems?"), 0.84

for instrumental aid (e.g., "How much does your closest family member help you when you need to get something done?"), and 0.88 for conflict (e.g., "How much do you and your closest family member disagree and quarrel?").

#### Data analysis

To assess similarities and differences between student-parent communication technology use for the 2009<sup>3</sup> and 2011 cohorts, the percentage of students using each form of communication with their parents were calculated for both cohorts. The percentages for each year were then compared using *t* tests. To assess the associations for the 2011 cohort between student-parent communication technology use and student attachment, loneliness, and relationship qualities with parents, multiple linear regression analyses were conducted. These results were then compared to those found for the 2009 cohort.<sup>3</sup>

#### Results

We compared the percentage of participants using each form of communication across the 2009 and 2011 cohorts. These participants indicated that they used the specified communication form (phone, e-mail, text, SNS, face-to-face contact) at least a few times a year or more. Results indicated that almost all participants had face-to-face contact with their parent and talked on the phone with their parent in both the 2009 and 2011 cohorts. However, the percentage of students using e-mail to communicate with their parents declined significantly from 2009 to 2011,  $t(420) = 3.90$ ,  $p < 0.001$ . Also, the percentage of students using text messages ( $t(422) = -5.62$ ,  $p < 0.001$ ) and SNS ( $t(423) = -5.09$ ,  $p < 0.001$ ) to communicate with their parent increased significantly from 2009 to 2011 (see Fig. 1).

Multiple linear regressions were conducted regressing loneliness, attachment, and relationship indices on frequency of using each communication form while co-varying in-

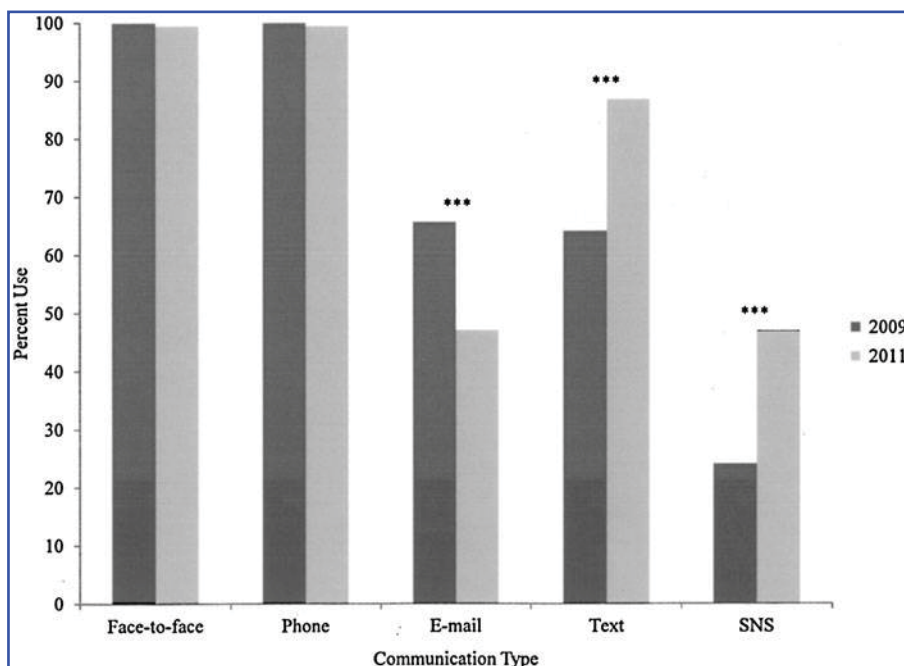


FIG. 1. Proportion of any amount of use for each communication form. \*\*\* $p < 0.001$ .

person contact and participant gender and age for the 2011 cohort (Table 1). Results indicated that students' phone use with parents was related to positive relationship qualities (satisfaction, intimacy, support, and instrumental aid). Additionally, e-mail use with parents was linked to greater instrumental aid. Women reported greater support from parents, males reported greater levels of avoidant attachment, and older students reported greater loneliness.

The above associations between student–parent use of communication technology and attachment, loneliness, and relationship qualities were compared to associations in the 2009 cohort.<sup>3</sup> The findings for phone use—that students who had more frequent telephone communication with their parent also reported greater relationship satisfaction, intimacy, support and instrumental aid—were consistent for the 2009 and 2011 cohorts. However, several differences in the associations also emerged. In the 2011 sample, e-mail use with parents was related to increased instrumental aid from parents, but this association was not present for the 2009 sample.<sup>3</sup> Additionally, in the 2009 sample, students who used a SNS with their parent reported significantly more loneliness and anxious attachment than students who did not use a SNS with their parent,<sup>3</sup> but using a SNS with parents was no longer linked to maladaptive outcomes for the 2011 cohort.

## Discussion

Because technology is rapidly changing, we collected data on communication forms used with parents from a cohort of college students in 2011 to be compared to previous data from a cohort in 2009.<sup>3</sup> The results suggested that the use of some forms of technology has changed (e-mail, text message, SNS), whereas rates of other forms remained the same (phone, in-person). From the current study, the meaning of these different channels of communication also becomes clearer. Specifically, phone use is consistently associated with higher quality parent–student relationships. In contrast, outcomes linked to SNS and e-mail use changed across cohorts. These data provide important insight into the changing implications of communication channels between parents and students.

When comparing the percentage of students using various forms of communication technology with parents across the

two cohorts, results indicated that in-person contact and phone use with parents is endorsed by almost all students, which is consistent across cohorts. However, using e-mail to communicate with parents became less common for students in the 2011 cohort compared to the 2009 cohort. In contrast, being online “friends” with parents on a SNS and using text messages to communicate with parents was more prevalent for students in 2011 compared to students in 2009. The growth of SNS and text messaging is consistent with overall findings on usage rates of communication technology.<sup>4,5</sup> However, the decline of e-mail usage is unusual compared to findings on overall e-mail usage rates noted by the Pew Internet and American Life Project.<sup>4</sup> Because of the steady increase in e-mail usage over time, it would be expected that this would continue to increase. It is possible that while overall e-mail usage is increasing, this is only true for certain groups of people or that it is increasing mainly for school or work purposes. Also, the increase in texting and SNS use across the 2 years may play a role in the decline in e-mail use for this sample.

Consistent with findings from students in 2009,<sup>3</sup> students in 2011 who had more frequent telephone communication with their parent also reported greater relationship satisfaction, intimacy, support, and instrumental aid, even when controlling for rates of other forms of communication. According to theory on media richness, phone communication is richer than many other forms of communication (e-mail, text message, SNS) because it provides users with instant feedback and multiples cues (i.e., voice tone, inflection).<sup>20</sup> Additionally, researchers have found that phone use with parents may be associated with a release of the hormone oxytocin. Specifically, female children who interacted with parents face-to-face or on the phone after experiencing a stressor released oxytocin, but those who only text messaged their parents after experiencing a stressor did not.<sup>21</sup> Their results suggest that voice communication (by phone or in-person) may promote bonding, given that research shows that oxytocin levels tend to increase during intimate encounters within close relationships.<sup>22,23</sup> Thus, with our study, hearing a parent's comforting voice via the telephone may offer benefits not offered by other electronic communication such as text messaging, e-mail, or using a SNS.

TABLE 1. MULTIPLE LINEAR REGRESSION RESULTS PREDICTING LONELINESS, ATTACHMENT, AND RELATIONSHIP QUALITIES FROM FREQUENCY OF USING EACH COMMUNICATION FORM WHILE CO-VARYING THE FREQUENCY OF IN-PERSON CONTACT WITH A PARENT AND PARTICIPANTS' GENDER AND AGE

	<i>Attachment</i>			<i>Parental Relationship Quality</i>				
	<i>Loneliness</i> $\beta$	<i>Avoidance</i> $\beta$	<i>Anxiety</i> $\beta$	<i>Satisfaction</i> $\beta$	<i>Intimacy</i> $\beta$	<i>Support</i> $\beta$	<i>Aid</i> $\beta$	<i>Conflict</i> $\beta$
Phone	–0.05	0.10	0.09	0.31***	0.40***	0.42***	0.41***	–0.08
E-mail	0.09	0.01	0.08	–0.02	0.04	0.06	0.17**	0.03
Text	–0.12	–0.04	–0.03	0.12	0.02	0.01	0.03	–0.05
SNS	0.07	0.00	0.06	–0.03	0.05	0.03	–0.08	0.04
Face-to-face	0.01	–0.02	–0.04	0.01	0.07	0.08	–0.05	0.10
Gender	–0.06	–0.14*	–0.11	–0.03	0.10	0.18**	0.07	–0.02
Age	0.15*	0.02	0.08	–0.08	–0.01	–0.02	–0.11	0.06
R <sup>2</sup>	0.07*	0.03	0.03	0.14***	0.22***	0.29***	0.24***	0.02
(adjusted)	(0.04)	(–0.01)	(0.00)	(0.11)	(0.19)	(0.28)	(0.22)	(–0.01)

Note. Gender: 0 = men; 1 = women. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

Additionally, in the 2011 sample, e-mail use with parents was related to increased instrumental aid from parents. This was not the case with the 2009 sample.<sup>3</sup> A possible post hoc explanation for this association in the 2011 cohort is that students are more frequently sending papers from their courses to their parents via e-mail to proofread and edit. In one study, 19% of students reported that their parents proofread their papers and 14% reported that their parents edit their papers.<sup>2</sup> This type of assistance may be best facilitated through e-mail because it is quicker than regular mail, and allows parents to view and edit the document on their own computer.

Another notable difference between the 2009 and 2011 cohorts pertained to SNS use. In 2009, only 24% of college students used a SNS with their parent, yet those who did reported significantly more loneliness and anxious attachment than students who did not use a SNS with their parent.<sup>3</sup> However, using a SNS with parents was no longer linked to maladaptive outcomes for the 2011 cohort. The number of middle-aged and older adults using Facebook dramatically increased from 2009 to 2011; only about 7.4 million adults aged 45 and older were using Facebook in 2009,<sup>24</sup> but this jumped to about 28 million adults aged 45 and older using Facebook in 2011.<sup>25</sup> It is likely that as Facebook and other SNS became more popular with middle-aged and older adults, more parents of college students began using a SNS. Consequently, it became more common for parents and their college-student children to friend each other on Facebook, and this communication channel no longer signified difficulty with the college students' adjustment or parental relationship.

Though these studies allow us to compare two cohorts of college students and assess the differences between cohorts, we are unable to examine how individual students and parents are changing over time due to the time-lag design of the study. Longitudinal data would provide more insight into the stability of students' use of communication technology with parents before, during, and after college. Additionally, data on academic outcomes (e.g., GPA, retention) may be important to assess in the future to determine if communication patterns predict differences in college students' academic success. In future research, questions on other forms of communication technology (e.g., video conferencing, instant messaging) could also provide additional useful information.

Overall, these studies highlight how quickly the use and implications of communication technology changes. The findings suggest that communication patterns may reflect broader psychosocial adjustment and relational parent-child dynamics for adolescents managing the transition to adulthood. However, these associations may be quite temporary. It is important for us to understand parent-student communication better and its outcomes during college. Findings such as these may also have implications for first year orientation programs for both students and parents.

#### Author Disclosure Statement

No competing financial interests exist.

#### References

1. Smith ME, Nguyen DT, Lai C, et al. (2012) Going to college and staying connected: communication between college freshman and their parents. *CSCW'12: Proceedings of the ACM 2012 conference on computer supported cooperative work*. New York: ACM, pp. 789–98.
2. Hofer BK, Moore AS. (2010) *The iConnected parent: staying connected to your college kids (and beyond) while letting them grow up*. New York: Simon & Schuster Free Press.
3. Gentzler AL, Oberhauser AM, Westerman D, et al. College students' use of electronic communication with parents: links to loneliness, attachment, and relationship quality. *CyberPsychology, Behavior, & Social Networking* 2011; 14:71–4.
4. Pew Internet and American Life Project. (2009) Online activities, 2000–2009. [www.pewinternet.org/Static-Pages/Trend-Data-%28Adults%29/Online-Activities-20002009.aspx](http://www.pewinternet.org/Static-Pages/Trend-Data-%28Adults%29/Online-Activities-20002009.aspx) (accessed July 26, 2012).
5. Lenhart A. (2010) Cell phones and American adults: they make just as many calls but text less often than teens. Pew Internet & American Life Project 2010. [www.pewinternet.org/~media/Files/Reports/2010/PIP\\_Adults\\_Cellphones\\_Report\\_2010.pdf](http://www.pewinternet.org/~media/Files/Reports/2010/PIP_Adults_Cellphones_Report_2010.pdf) (accessed July 26, 2012).
6. Liu EZF, Lin CH, Chen FY, et al. Cluster analysis of adolescent blogs. *Turkish Online Journal of Educational Technology* 2012; 11:69–79.
7. Wu SY, Wang ST, Liu EZF, et al. The influences of social self-efficacy on social trust and social capital: a case study of Facebook. *Turkish Online Journal of Educational Technology* 2012; 11:246–54.
8. Hofer BK. The electronic tether: parental regulation, self-regulation, and the role of technology in college transitions. *Journal of the First-Year Experience & Students in Transition* 2008; 20:9–24.
9. Peplau LA, Perlman D. (1982) *Loneliness: a sourcebook of current theory, research, and therapy*. New York: Wiley.
10. Sum S, Mathews M, Hughes I, et al. Internet use and loneliness in older adults. *CyberPsychology & Behavior* 2008; 11:208–11.
11. van den Eijnden R, Meerkerk GJ, Vermulst A, et al. Online communication, compulsive Internet use, and psychosocial well-being among adolescents: a longitudinal study. *Developmental Psychology* 2008; 44:655–65.
12. Bernier A, Larose S, Whipple N. Leaving home for college: a potentially stressful event for adolescents with preoccupied attachment patterns. *Attachment & Human Development* 2005; 7:71–85.
13. Bowlby J. (1973) *Attachment and loss: Volume 2. Separation: anxiety and anger*. New York: Basic Books.
14. Mikulincer M, Shaver P R. (2007) *Attachment in adulthood: structure, dynamics, and change*. New York: Guilford Press.
15. Mattanah JF, Lopez FG, Govern JM. The contributions of parental attachment bonds to college student development and adjustment: a meta-analytic review. *Journal of Counseling Psychology* 2011; 58:565–96.
16. Russell D, Peplau LA, Cutrona CE. The revised UCLA Loneliness Scale: concurrent and discriminant validity evidence. *Journal of Personality & Social Psychology* 1980; 39:472–80.
17. Brennan KA, Clark CL, Shaver PR. (1998) Self-report measurement of adult attachment. In Simpson JA, Rholes WS, eds. *Attachment theory and close relationships*. New York: Guilford Press, pp. 46–76.
18. Fraley RC, Waller NG, Brennan KA. An item-response theory analysis of self-report measures of adult attachment. *Journal of Personality & Social Psychology* 2000; 78: 350–65.

19. Furman W, Buhrmester D. Children's perceptions of the personal relationships in their social networks. *Developmental Psychology* 1985; 21:1016–24.
20. Trevino LK, Daft RL, Lengel RH. (1990) Understanding managers' media choices: a symbolic interactionist perspective. In Fulk J, Steinfield CW, eds. *Organizations and communication technology*. Thousand Oaks, CA: Sage, pp. 71–94.
21. Seltzer LJ, Prosofski AR, Ziegler TE, et al. Instant messages vs. speech: hormones and why we still need to hear each other. *Evolution & Human Behavior* 2011; 33:42–5.
22. Feldman R, Gordon I, Zagoory-Sharon O. Maternal and paternal plasma, salivary, and urinary oxytocin and parent-infant synchrony: considering stress and affiliation components of human bonding. *Developmental Science* 2010; 14:752–61.
23. IsHak WW, Kahloon M, Fakhry H. Oxytocin role in enhancing well-being: a literature review. *Journal of Affective Disorders* 2011; 130:1–9.
24. Smith J. (2009) Number of US Facebook users over 65 nearly doubles in last 60 days. [www.insidefacebook.com/2009/03/25/number-of-us-facebook-users-over-35-nearly-doubles-in-last-60-days/](http://www.insidefacebook.com/2009/03/25/number-of-us-facebook-users-over-35-nearly-doubles-in-last-60-days/) (accessed July 24, 2012).
25. Burbary K. (2011) Facebook demographics revisited—2011 statistics. [www.kenburbary.com/2011/03/facebook-demographics-revisited-2011-statistics-2/](http://www.kenburbary.com/2011/03/facebook-demographics-revisited-2011-statistics-2/) (accessed July 24, 2012).

Address correspondence to:

*Meagan Ramsey*

*53 Campus Drive*

*Morgantown, WV 26506*

*E-mail: mhoward5@mix.wvu.edu*