



## Using technology to control intimate partners: An exploratory study of college undergraduates

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### ARTICLE INFO

#### Article history:

Available online 26 January 2011

#### Keywords:

Cyber relationships  
Undergraduates  
Control  
Monitor  
Computers

### ABSTRACT

This study examined the extent to which a sample of 804 undergraduates at a large southeastern university used communication technology (e.g., cell phone, email, social network sites) to monitor or control partners in intimate relationships and to evaluate their perceptions of the appropriateness of these behaviors. Results of the online survey revealed that half of both female and male respondents reported the use of communication technology to monitor partners, either as the initiator or victim. Females were significantly more likely than males to monitor the email accounts of their partners (25% vs. 6%) and to regard doing so as appropriate behavior. Limitations and implications are suggested.

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### 1. Introduction

Use of technology is rampant among today's young adults. Ninety-three percent of millennials (those born in 1982 or later), ages 18–28, have a cell phone and use the Internet regularly; 62–88% of young adults regularly text and 72% use social networking sites (Lenhart, Purcell, Smith, & Zickuhr, 2010). College students also embrace the use of communication technologies such as mobile phones, short messaging services (SMS), email, instant messaging, and social networking sites in record number (Martin & Crane, 2007; Nielsen, 2009). While these innovations and increased accessibility to them have afforded various social benefits and conveniences for college students, they have also provided a mechanism for the increased potential for interpersonal intrusion (Finn & Banach, 2000; Kandell, 1998; Spitzberg & Hoobler, 2002) to the point of obsessive relational intrusion (Cupach, Spitzberg, & Carson, 2000). This research explored the extent to which a sample of college students reported using communication technology to monitor or control partners in their intimate relationships and to evaluate the degree to which they viewed such behavior as appropriate.

Among college and university students, the use of text messages, emails, cell phones, social network postings and webcams are popular technological tools for beginning, escalating, and maintaining romantic relationships. Researchers such as Lee (1998), Southworth, Finn, Dawson, Fraser, and Tucker (2007) and Spitzberg

and Hoobler (2002) have documented the interpersonal use of technology by the modern day college student. While communication technology has become a vehicle for students to initiate, maintain and escalate their relationships with each other, these same technologies also make college students more accessible and thus more susceptible to interpersonal intrusion and, in extreme cases, controlling behaviors (Avin, 2000; Martin & Crane, 2007; Nielsen, 2009; Sharples, Graber, Harrison, & Logan, 2009). These technologies may also be used to harass or abuse a partner, particularly female college students and young adults (Alexy, Burgess, Baker, & Smoyak, 2005; Bocij & McFarlane, 2002; Gregorie, 2001; Southworth et al., 2007; US Department of Justice, 1999, 2001). For example, Spitzberg and Hoobler (2002) found that at least 30% of their respondents experienced some sort of cyber-based unwanted pursuit. Short and McMurray (2009) concluded that harassment by texting is more prevalent than other forms of offline harassment. Alexy et al. (2005) noted that the person most likely to cyberstalk an individual was a former intimate partner.

Further evidence of abuse by means of communication technology is from Finn (2004) who found that ten to fifteen percent of 339 students had received repeated threatening, insulting, or harassing emails or Instant Messenger (IM) messages. Other questionable uses of technology include checking the history of a partner's email or cell phone accounts, making an excessive number of cell phone calls to partners, sending an excessive number of text messages, checking a partner's social networking sites (My Space or Facebook) to monitor activity, using GPS/cell phone locators/Google maps to monitor a partner's whereabouts, using webcams to monitor a partner's activities, using SpyWare to monitor a partner's computer, and insisting on knowing passwords of a partner's accounts.

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Spitzberg and Cupach (2007) noted in their study on stalking behavior that one of the insidious implications of using communication technology is that some of the behaviors engaged in are relatively indistinguishable from acceptable relational or courtship behaviors. For example, the use of frequent text messaging in early courtship is initially regarded as evidence of romantic interest. However this same behavior may eventually be used and viewed as annoying, obsessive, harassing or even as cyberstalking when the relationship ends. Lee (1998) noted that being in love blurred the victim's perception of whether or not they were being stalked. The current study also provides insight into the issue of victims lacking objectivity when assessing appropriate and inappropriate online behaviors.

The line between what is appropriate and what is intrusive is unclear. Current literature lacks research data on the college population's use of technology as a medium for controlling behaviors. The current study was designed to document the extent to which college students over use, or inappropriately use, technology in their romantic relationships, the extent to which college students report that their romantic partners have used technology in this way to monitor or control them and the degree to which these various uses of technology is regarded as appropriate in romantic relationships. This study also examines the properties of the newly created Controlling Partners Inventory (CPI) within a sample of 804 college undergraduates. Questions of reliability, factor structure, and levels of technological control and monitoring by various demographic variables will be addressed in this report. The research questions for the study are: (1) Do college students use various communication technologies to monitor or control partners in intimate relationships? (2) Are college students the victim of such monitoring or controlling behaviors? (3) What are the demographics of students who are both the initiators and the recipients of this type of behavior? (4) What are the validity and reliability of the CPI-Self/Partner scale?

## 2. Methods

### 2.1. Participants

The sample consisted of 804 undergraduates (a 62% response rate) from a large southeastern university. Ages ranged from 18 to 23 ( $M = 19.12$ ) years. Regarding race, 77% of the sample identified as white, 14% as black, and 9% as "other" (Latino, Asian-American, and American Indian). Of those indicating gender, 500 participants (67.1%) were females and 245 (32.9%) were males, compared to the university's profile of 62% female and 38% male (Office of Institutional Planning, Assessment, & Research, 2009).

### 2.2. Procedure

Because there is limited research pertaining to this topic, an established instrument was not available. The researchers included five personal/demographic items (gender, age, ethnicity, class standing, and residency) to the newly developed CPI for the purposes of this study. The CPI included 18 items inquiring about whether or not the respondents had experienced or performed "monitoring" behaviors and 18 items soliciting the respondent's opinion of the appropriateness of these behaviors in an intimate relationship. For each of the 18 monitoring behaviors, participants were asked to respond to two items: "I have done this" ("CPI-Self") and "partners have done this to me" ("CPI-Partner"). The five response choices ranged from "never" to "4 or more times." Content and face validity of the instrument were established by expert researchers in the field. The data were subjected to a Principal Component Analysis (PCA) to classify and construct the

relationship between variables and factors. Additionally, reliability measures to assess the consistency of scores from items in the instrument were assessed. Cronbach's coefficient alpha was used to determine internal consistency reliability.

Participants were recruited from a personal health course required for graduation. Researchers used in-class and online announcements to ask these students to complete the anonymous survey. Responses were collected online using Qualtrics Survey Software. Receipts were generated when completed surveys were submitted. Participants received extra-credit points by presenting these printed receipts to their health instructors. The survey, consent form, and research protocols were approved by the university's Institutional Review Board.

## 3. Results

Survey results were entered into an Excel file and PASW version 18 was used to analyze the data. The female mean score for the CPI-Self was 26.28 ( $SD = 7.97$ ) and the male mean score was 23.95 ( $SD = 8.50$ ). The CPI-Partner mean scores for males and females were 27.66 ( $SD = 9.07$ ) and 26.21 ( $SD = 9.65$ ) respectively. The range for the CPI (both Self and Partner) is 18–90.

The mean CPI-Self/Partner scores by demographic groupings are presented in Table 1. According to a two-tailed *t*-test, females reported engaging in controlling and monitoring behavior significantly more than their male counterparts ( $M = 26.28$ ,  $SD = 7.97$ ),  $t(804) = 3.83$ ,  $p = .000$ . It was also found that more females were the victims of controlling and monitoring behaviors ( $M = 27.66$ ,  $SD = 9.07$ ),  $t(804) = 2.10$ ,  $p = .036$ . One-way ANOVA showed no significance for age, which the researchers suspected due to the lack of variance in age. The majority of students were only 18 years of age with 25% being 19. One-way ANOVA also showed no significance for ethnicity (black, white, or other). The results of a one-way ANOVA revealed that sophomores were more likely than freshman, juniors, and seniors to have been the victim of a controlling or monitoring partner,  $F(4, 799) = 2.32$ ,  $p = .052$ . Place of residency differed significantly between groups with those living in a Greek fraternity or sorority and those living with parents having monitored or controlled a partner via online technology and also being the victim of this behavior more  $F(3, 801) = 8.36$ ,  $p = .000$ ;  $F(3, 801) = 8.17$ ,  $p = .000$ . Post hoc analysis using Scheffe multiple comparison test showed the following groups to differ significantly ( $p < .01$ ): "dorm" vs. "Greek house", "Greek house" vs. "off-campus", "Greek house" vs. "with parents" for those who self-reported in engaging in this behavior and for those who reported being the victim of a controlling or monitoring partner.

A chi-square test of independence was calculated comparing the frequency of initiating and experiencing monitoring behaviors and gender (Tables 2 and 3). A significant interaction was found between gender and checking cell phone and email histories and making excessive calls (defined by the researchers as an atypical number that made you feel uncomfortable). Female students were more likely to monitor partners' behaviors by checking call histories ( $\chi^2(1) = 35.534$ ,  $p < .01$ ), checking email histories ( $\chi^2(1) = 32.405$ ,  $p < .01$ ) and making excessive calls ( $\chi^2(1) = 10.641$ ,  $p < .01$ ). Conversely, females were significantly more likely to report a partner's use of technology, such as checking call histories ( $\chi^2(1) = 14.513$ ,  $p < .01$ ) and checking email histories ( $\chi^2(1) = 12.036$ ,  $p < .01$ ), and receiving excessive phone calls ( $\chi^2(1) = 14.730$ ,  $p < .01$ ), to monitor their behavior (see Table 3). More than 50% of females report checking social networking sites to monitor their partners, also showing a significant difference between males and females ( $\chi^2(1) = 17.634$ ,  $p < .01$ ). One-in-five females indicated that they monitor their partners' behavior by sending excessive emails. More than 20% of females use a partner's password to

**Table 1**  
Mean CPI scores by demographic characteristics.

	<i>N</i>	<i>N</i> = 804 <i>M</i>	<i>SD</i>
<i>Gender</i>			
Have done themselves			
Females	532	26.28	7.97
Males	272	23.95	8.50
Two-tailed <i>t</i> -test; $t(804) = 3.83, p < .01$			
Had this done to them			
Females	532	27.66	9.07
Males	272	26.21	9.65
Two-tailed <i>t</i> -test; $t(804) = 2.10, p < .05$			
<i>Age</i>			
Have done themselves			
18	408	25.31	7.97
19	198	26.15	7.80
20	70	26.73	11.14
21 and over	91	24.89	7.87
One-way ANOVA; $F = .82$ , nonsignificant			
Had this done to them			
18	408	27.04	8.80
19	198	27.86	9.27
20	70	28.67	12.04
21 and over	91	27.46	10.53
One-way ANOVA; $F = 1.15$ , nonsignificant			
<i>Ethnicity</i>			
Have done themselves			
White	622	25.32	8.06
Black	112	25.87	7.91
Other	71	26.34	9.93
One-way ANOVA; $F = .63$ , nonsignificant			
Had this done to them			
White	622	27.08	9.24
Black	112	26.73	8.05
Other	71	28.25	11.31
One-way ANOVA; $F = .63$ , nonsignificant			
<i>Classmanship</i>			
Have done themselves			
Freshman	489	25.11	7.43
Sophomore	223	26.53	9.02
Junior	66	25.36	10.78
Senior	22	24.09	7.27
Other	4	24.75	7.32
One-way ANOVA; $F = 1.32$ , nonsignificant			
Had this done to them			
Freshman	489	26.70	8.28
Sophomore	223	28.06	10.21
Junior	66	27.97	11.97
Senior	22	24.68	7.28
Other	4	36.25	22.25
One-way ANOVA; $F = 2.32, p < .05$			
<i>Residency</i>			
Have done themselves			
Dorm	483	25.08	7.38
Greek house	6	41.33	25.59
Off-campus	290	25.68	7.72
With parents	26	26.92	15.42
One-way ANOVA; $F = 8.36, p < .01$			
Scheffe multiple comparison test showed the following groups to differ significantly ( $p < .01$ ): "dorm" vs. "Greek house", "Greek house" vs. "off-campus", "Greek house" vs. "with parents."			
Had this done to them			
Dorm	483	26.75	8.42
Greek house	6	44.50	29.30
Off-campus	290	27.20	8.70
With parents	26	29.73	16.70
One-way ANOVA; $F = 8.17, p < .01$			
Scheffe multiple comparison test showed the following groups to differ significantly ( $p < .01$ ): "dorm" vs. "Greek house", "Greek house" vs. "off-campus", "Greek house" vs. "with parents."			

**Table 2**  
Difference between genders in technology usage when monitoring partner behavior.

Monitoring behaviors	% who reported initiating behavior one or more times		$\chi^2$	df	Asymp. Sig.
	Female	Male			
Sending excessive emails	21	14	5.38	1	.020
Checking call histories	65	41	35.534	1	.000*
Checking email histories	34	14	32.405	1	.000*
Checking cell phone bills	6	4	1.216	1	.270
Making excessive # of phone calls	56	43	10.641	1	.001*
Making excessive # of texts	47	40	3.411	1	.065
Monitoring partner's Facebook site	58	41	17.634	1	.000*
Making inappropriate Facebook postings	10	9	.547	1	.460
Posting inappropriate pictures on Facebook	3	6	5.806	1	.016
Using GPS device to monitor partner	1	5	7.845	1	.005*
Using web cams to monitor partner	2	5	4.729	1	.030
Using hidden cams to monitor partner	<1	3	8.188	1	.004*
Using spy ware to monitor partner	<1	2	3.284	1	.070
Using partner's passwords to monitor him/her	23	7	30.955	1	.000*

\*  $p < .01$ .

**Table 3**  
Difference between genders in experiencing partner's usage of technology to monitor behavior.

Monitoring behaviors	% who reported experiencing a partner's usage of technology to monitor behavior one or more times		$\chi^2$	df	Asymp. Sig.
	Female	Male			
Sending excessive emails	36	28	3.775	1	.052
Checking call histories	63	48	14.513	1	.000*
Checking email histories	25	14	12.036	1	.001*
Checking cell phone bills	5	5	.002	1	.965
Making excessive # of phone calls	65	50	14.730	1	.000*
Making excessive # of texts	53	50	.652	1	.420
Monitoring partner's Facebook site	55	48	3.704	1	.054
Making inappropriate Facebook postings	12	12	.003	1	.954
Posting inappropriate pictures on Facebook	3	8	10.423	1	.001*
Using GPS device to monitor partner	1	4	4.980	1	.026
Using web cams to monitor partner	2	6	7.128	1	.008*
Using hidden cams to monitor partner	<1	3	6.251	1	.012
Using spy ware to monitor partner	1	3	4.831	1	.028
Using partner's passwords to monitor him/her	2	6	7.128	1	.008*

\*  $p < .01$ .

**Table 4**  
Factor loading of CPI-Self.

Item	Rotated component matrix: CPI-Self				M	SD
	Component					
	Factor 1: Photos, camera, SpyWare	Factor 2: Excessive communication	Factor 3: Threatening	Factor 4: Checking behaviors		
Checked sent/received email histories				.783	1.60	1.177
Checked partner's cell call histories				.557	2.43	1.596
Used partner's password to check-up on them				.756	1.28	.756
Send threatening emails to partner			.687		1.14	.547
Made threatening cell calls to partner			.757		1.14	.574
Sent threatening text to partner			.727		1.12	.577
Sent excessive number of emails to partner		.399			1.38	.933
Made excessive number cell calls to partner		.798			2.32	1.575
Sent excessive number of texts to partners		.840			2.27	1.652
Checked social network page to monitor partner		.615			2.30	1.570
Checked partner's cell phone bill	.336				1.14	.628
Made embarrassing, insulting, threatening wall posts	.455				1.18	.637
Threatened to post inappropriate photos of partner	.797				1.08	.449
Posted inappropriate photos of partner	.796				1.07	.408
Used GPS etc. to monitor partner's location	.657				1.06	.412
Used Web cam to monitor partner's activities	.655				1.08	.528
Used hidden camera to monitor my partner's activities	.851				1.03	.308
Use spy ware to monitor my partner's activities	.722				1.03	.314

Note:  $N = 804$ . For clarity, only those loadings greater than  $\pm .30$  are reported. The respondents used the following choices when reporting these behaviors: 1 = never, 2 = only once, 3 = two times, 4 = three times, 5 = four or more times.

**Table 5**  
Factor loading of CPI-Partner.

Item	Rotated component matrix for CPI-Partner				M	SD
	Component					
	Factor 1: Photos, camera, GPS, SpyWare	Factor 2: Excessive communication	Factor 3: Threatening	Factor 4: Checking behaviors		
Partner has checked my sent/received email histories				.734	1.50	1.138
Partner has checked my cell call histories				.588	2.58	1.671
Partner checked my cell phone bill				.359	1.15	.672
Partner used my password to check-up on me				.662	1.36	.892
Partner has sent threatening emails to me			.791		1.14	.547
Partner made threatening cell calls to me			.789		1.30	.866
Partner sent threatening text to me			.762		1.24	.807
Partner made excessive number of cell calls to me		.778			2.71	1.707
Partner sent excessive # of texts to me		.796			2.52	1.733
Partner has sent excessive number of emails to me		.429			1.67	1.154
Partner checked social network page to monitor me		.560			2.46	1.671
Partner made embarrassing, insulting, threatening wall posts	.422				1.23	.759
Partner threatened to post inappropriate photos	.702				1.11	.510
Partner posted inappropriate photos of me	.791				1.10	.511
Partner used GPS etc. to monitor my location	.705				1.05	.423
Partner used web cam to monitor my activities	.603				1.09	.538
Partner used hidden camera to monitor my activities	.801				1.03	.309
Partner used spy ware to monitor my activities	.612				1.04	.349

Note:  $N = 804$ . For clarity, only those loadings greater than  $\pm 0.30$  are reported. The respondents used the following choices when reporting these behaviors of a current or previous partner: 1 = never, 2 = only once, 3 = two times, 4 = three times, 5 = four or more times.

monitor electronic communication compared to 6% of males. While the percentage is low (3%), significantly more males used hidden cameras to monitor their partners than females (.4%). Male respondents were also significantly more likely to monitor a partner's behavior with the use of GPS monitoring ( $\chi^2(1) = 7.845, p < .01$ ), with 5% of males and 1% of females reporting initiating this behavior.

### 3.1. Reliability and factor structure of the CPI

The instrumentation was split into two different sub-scales (CPI-Self) as half the items measure controlling behaviors respondents engage in and the other items (CPI-Partner) measure what controlling behaviors respondents have experienced by their partners.

Overall, the CPI showed good internal consistency; the alpha coefficient (using Cronbach's alpha) was .90. The Guttman split-half and Spearman–Brown coefficients were .85 and .75 respectively. Using principal component factor analysis with Varimax rotation, the researchers obtained the following four interpretable factors for CPI-Self: (1) photos, camera, and SpyWare – using hidden webcams or SpyWare to monitor a partner's behavior or threatening to or actually posting inappropriate, nude, or embarrassing photos of a partner; (2) excessive communication – respondent made excessive numbers of cell phone calls or texts; (3) threatening – sending threatening phone calls, text messages, or emails; (4) checking behaviors – using partner's password to check computer and checking cell call and email histories. Using principal component factor analysis with Varimax rotation, the researchers obtained the following four interpretable factors for CPI-Partner which were very similar to the results of the CPI-Self items: (1) photos, camera, GPS and SpyWare – respondent experienced that others had used hidden webcams, GPS, or SpyWare to monitor a partner's behavior or threatening to or actually posting inappropriate, nude, or embarrassing photos of a partner; (2) excessive communication – excessive numbers of cell phone calls or texts were made to a partner; (3) threatening – sending threatening phone calls, text messages, or emails; (4) checking behaviors – using partner's password to check computer and checking cell call and email histories. These factors accounted for 58.3% of the

variance. The factor analysis yielded four factors for both CPI-Self and CPI-Partner with eigenvalues greater than ( $>$ ) 1. See Tables 4 and 5 for factor loadings of the CPI-Self and Partner.

## 4. Discussion

Consistent with the literature, technological devices and platforms such as computers, cell phones and social networking sites (for example Facebook) are providing a vehicle for personal intrusion and excessive monitoring (Finn & Banach, 2000; Kandell, 1998; Spitzberg & Hoobler, 2002) or even obsessive relational intrusion (Cupach et al., 2000). This study explored the phenomena of technological communications device use and when methods common in everyday life, particularly among college-aged populations, become used for invasion of privacy and monitoring. Greater insight was also provided from those who have experienced controlling or monitoring behaviors from a current or former partner. The results show that 50% of students surveyed (both male and female) were either the initiator or victim of this behavior. Approximately 25% of female college students monitor their partner's behavior by checking emails, even password-protected electronic accounts, vs. only a smaller percentage ( $n = 6\%$ ) of males.

Our female data confirm Spitzberg and Hoobler (2002) findings that at least 30% of respondents experienced some sort of cyber-based unwanted pursuit. Our female findings are higher than those in Finn's (2004) data indicating 10–15% of students received repeated threatening, insulting, or harassing emails or Instant Messenger (IM) messages. Though not a large percentage, use of hidden cameras and GPS among mostly male students was noted. A final result is that monitoring behaviors differed according to racial groups with more black students being the victim of partners monitoring their cell phone histories. Blacks were also more likely than whites to report monitoring partner's cell phone histories. Further research investigating population differences may be of interest. The study provides initial insight of college women, overall, engaging in online monitoring or controlling behaviors more than men. Women report being the victim of online monitoring as well. However, when considering hidden cameras, men engage in the behavior more than women which may be due to men having greater familiarity with the technical workings of cameras and

webcams, which is only speculative. Our findings refute Alexy et al. (2005) who reported male students were statistically more likely than female students to have been cyber stalked with white males having the highest correlation. Findings revealed that sophomores were more likely to be the victim of this behavior. This may be because sophomores have been in college for one year longer than freshman and may be more susceptible to being both the recipient of this behavior than freshman due to a more established independence. The populations for juniors and seniors may have been too small to find significance or inference. Though a small sample size, residency may also be an area to explore further with those living in a fraternity or sorority and those living with parents being the most at risk for both monitoring or controlling others via technology or being the recipient of this behavior. It may be instructive to explore why this behavior is more likely to occur in each of these settings.

#### 4.1. Limitations

Findings and implications for this study should be interpreted cautiously and limits acknowledged. The sample of college freshman was a convenience sample from one southeastern university and may not be generalizable to other college populations. Large random national samples are needed to replicate this study's findings. Second, female respondents are overrepresented in the study. However, it should be pointed out that at both where the study was conducted and nationwide, women now account for a disproportionate share of college enrollments, approaching 60% (Aud et al., 2010). Consequently, an equal gender representation in a random sample of college students is not likely, nor is it representative of most US institutions of higher education. Third, self-report measures are subject to reporting bias and respondents answering in an untruthful manner. Additionally, the term "excessive" on the instrumentation was not defined by the researchers but was self-defined by the respondents. The researchers acknowledge that the term and meaning of excessive is a fairly subjective term. Future assessment or refinement of the instrumentation could include an open-ended item asking respondents to quantify what they consider to be "excessive". Finally, extra-credit was offered to the students for completion of the survey, which may have impacted response validity.

#### 4.2. Recommendations

Findings of the current research confirm the need for targeted safety prevention programs for college students. Innovative technology-based prevention such as safety campaigns on social networking sites (Facebook, Twitter, etc.) and text messaging campaigns that addresses controlling behaviors or cyber harassment could be effective. To promote the recognition of appropriate partner interactions and to encourage healthy relationships, campus-based prevention programs and personal health course content are needed to address these issues among college students. Additionally, advocacy and policy reform to protect electronic information and personal information should be considered. Future research could serve to provide a clearer picture of when technological connectedness moves from interest and romantic

pursuit to obsession and controlling behavior. Future studies should also investigate effective measures taken by college students to end unhealthy monitoring and controlling behaviors. The CPI can be expanded to further define and measure perceptions and attitudes related to threatening behaviors. Further exploration into the potential effect of residency on monitoring and controlling others via technology or being the recipient of this behavior is needed. The now validated CPI can also be used in future research to measure the standardized magnitude of differences to provide direct comparisons between behaviors.

#### Disclosure statement

No competing financial interests exist by the authors: Sloane C. Burke, Michele Wallen, Karen Vail-Smith, and David Knox.

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