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By: **Catherine D. Marcum**, George E. Higgins, and Jason Nicholson

Abstract

As technology has become an ever-present facet in the lives of young people, they have become reliant on it to form and maintain relationships. It has also helped facilitate negative relationship behaviors, such as the monitoring of romantic partners without their permission (aka cyberstalking). The purpose of this study is to investigate theoretical predictors of cyberstalking in a sample of university students by applying General Theory of Crime and Social Learning Theory. Results indicated that low self-control and deviant peer association are significant predictors of cyberstalking, specifically attempting to log-in to a person's social media, as well as social media presence and sex.

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Abstract As technology has become an ever-present facet in the lives of young people, they have become reliant on it to form and maintain relationships. It has also helped facilitate negative relationship behaviors, such as the monitoring of romantic partners without their permission (aka cyberstalking). The purpose of this study is to investigate theoretical predictors of cyberstalking in a sample of university students by applying General Theory of Crime and Social Learning Theory. Results indicated that low selfcontrol and deviant peer association are significant predictors of cyberstalking, specifically attempting to log-in to a person's social media, as well as social media presence and sex.

Introduction

The amount of research in the criminological and legal field has continued to indicate that cyberstalking is a serious and growing problem for online users. This is especially true for those who are currently in romantic relationships and are so reliant on the

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Internet to maintain relationships. For example, a study measuring only cyberstalking indicated that just over 40 % of respondents had experienced cyberstalking (Reyns, Henson, & Fisher, 2012), while a study focused solely on social network users estimated cyberstalking victimization to just over 6 % (Dreßing, Bailer, Anders, Wagner, & Gallas, 2014). As a result of the importance of the issue, as well as its distinct relationship to stalking in the physical sense, cyberstalking literature is growing and a better understanding of the predictors of the behaviors is emerging well (Holt & Bossler, 2009; Marcum, Higgins, & Poff, 2016; Reyns et al., 2012).

A recent study utilized General Theory of Crime and Social Learning Theory to explore potential predictors of cyberstalking in young adults. Marcum et al. (2016) found that university students with low self-control were more likely to victimize romantic partners by logging onto their social networking and bank accounts without their knowledge, as well as using GPS tracking devices on their mobile phones without their permission. Termed Bthe electronic leash^ or Binterpersonal electronic surveillance,^ this intrusive violation (often referred to as cyberstalking) was surprisingly not significantly related to deviant peer interaction, which was previously found to significantly predict multiple forms of cybercrime. Further investigation of these behaviors is required to get a clearer picture of theoretical predictors so preventative programs and policies can be implemented.

The present study will also explore cyberstalking by students in a university setting, specifically examining attempts to log into a person's social media. The current research regarding communication via technology and relationships will be presented, followed by a discussion of how the behavior explored in this study is a version of cyberstalking. The analysis and results will discuss the predictive factors of cyberstalking behavior. Lastly, we will provide interpretation and real-life implications of these findings as it relates to understanding romantic relationships in this era.

Literature Review

Communication via electronic means is not unusual, if not preferred, by young adults for relationship maintenance, whether it be with a parent, friend, or romantic partner. Sending a quick message via email, text message, or messaging app is easier than having a lengthy telephone conversation. These involve no direct interaction, and are quicker ways to relay information, schedule dates, and keep in touch (Torres, Robles, & DeMarco, 2013). According to Duggan (2015), almost half of smartphone owners considered Byoung adults^ (between the ages 18–29 years old) use messaging apps. Messaging apps such as Kik or WhatsApp are extremely popular, or messaging apps that automatically delete messages (Snapchat or Wickr) are also used by this age group.

Social networking websites are another popular medium for communication that give users the ability to contact friends and family directly, as well as create a personal profile to represent to the general Internet community (Papacharissi, 2011). According to a study performed by the Pew Research Center on social media usage (Perrin, 2015a, b), approximately 65 % of American adults are using at least one social media/networking website, with the most popular sites being Facebook and Instagram. This is a 7 % increase from 10 years ago. As of March 2016, Facebook had 1.09 billion daily

active users and 989 million mobile active users, indicating the constant use and reliance of this particular source for information (Facebook, 2016).

Young adults are the most likely to use social media and were amongst the earliest adopters of the technology. Historically, women were the most likely to use social media, but that gap is closing as of today with 68 % of women and 62 % of men using social media. It is also interesting to note that there is not a noticeable difference between ethnic and racial groups in regard to percentage who use social media (65 % of whites, 65 % of Hispanics, and 56 % of African-Americans) (Perrin, 2015a, b). However, individuals with at least come college education (those targeted in this particular study) are more likely to utilize one of these websites.

Based on this generation's reliance on technology for communication, social networking websites often play a crucial role in initiating and maintaining relationships (Carpenter & Spottswood, 2013; Papp, Danielewicz, & Cayemberg, 2013; Torres et al., 2013; Trepte & Reinecke, 2013). Social networking websites can facilitate closeness and intimacy between romantic partners if the website is used in a positive way (Blais, Craig, Pepler, & Connolly, 2008; Caughlin & Sharabi, 2013). However, social networking can also open a door for negative relationship behaviors that can be damaging to the participants in the relationship, as well as the state of the relationship. For example, a romantic partner can monitor behaviors of the other partner without the knowledge of that person, especially if he has access to passwords to email accounts, Facebook profiles, or bank accounts. Consistent monitoring of a person's online presence has been termed Binterpersonal electronic surveillance^ (IES), where romantic partners can spend quite a large amount of time watching the other romantic partner's online behavior without her direct knowledge (Elphinston & Noller, 2011; Fox & Warber, 2013; Marshall, 2012; Tokunaga & Gustafson, 2014). For example, a boyfriend can log into a girlfriend's Facebook account to monitor messaging communication between her and other people (possibly suspected love interests), or a girlfriend can check on a boyfriend's email account activity. Social networking and media websites also give ex-partners a distinct advantage if they remain online Bfriends^ with their past partner, as they are still able watch the personal updates and behaviors of the ex. Often called Bcreeping^ or BFacebook stalking,^ this violating form of behavior is often unknown by person being monitored.

If these behaviors mentioned above were mimicked in the physical world (e.g., going through a boyfriend's mail, reading bank statements, or looking through closets for evidence of cheating) without the permission of the significant other, legally these behaviors could be called stalking. This online invasive form of partner monitoring, which is becoming more and more of a frequent occurrence by romantic partners (Chaulk & Jones, 2011), is now legally considered cyberstalking. Compared to other forms of criminality, this is fairly new in regard to developing statutes, punishments, and prevention techniques.

Cyberstalking

Cyberstalking is an adapted definition of physical stalking as applied to technology and electronic devices. According to Reyns et al. (2012), it is the use of the Internet and other technological devices to monitor or harass another person in a threatening way. Information gathered by cyberstalkers can be used to threaten or intimidate the victim,

or they may send unwanted, repetitious emailing or instant messaging (Baum, Catalano, Rand, & Rose, 2009). Listening devices, computer spyware, and video/digital cameras can also be used to stalk online. Cyberstalkers can even impersonate victims by accessing email accounts or social networking accounts, and posing as that person by assuming that person's identity when sending messages or posts (Sheridan & Grant, 2007). While federal and state legislation currently recognize cyberstalking as a serious criminal justice issue, there is still debate of whether it is an extension of stalking in the physical sense or its own entity in regards to a social problem (Bocij & McFarlane, 2003; Sheridan & Grant, 2007).

Cyberstalking is also becoming more of a prominent issue in the field of cybercrime and criminal justice research, as empirical studies are supporting the assertion that it is becoming a serious problem much like physical stalking. In fact, there is a significant relationship between the likelihood of experiencing both forms of vicitimization. For example, the National Crime Victimization Survey's Supplemental Victimization Survey revealed that 21.5 % of respondents who were stalked in the physical realm also reported experiencing cyberstalking (Baum et al., 2009). Fisher, Cullen, and Turner (2002) polled a nationally representative study of college women in the United States and found 25 % of respondents who were stalked offline also experienced cyberstalking (Fisher et al., 2002).

Cyberstalking and the term Bcyber dating abuse^ are often used interchangeably, especially when considering the victimization of young adults and adolescents online (Borrajo, Gamez-Guadix, Prereda, & Calvete, 2015; Lyndon, Bonds-Raacke, & Cratty, 2011; Zweig, Dank, Yahner, & Lachman, 2013). Cyber dating abuse, although not a legal term but used in social and education settings, often mirrors the same behaviors identified as cyberstalking: monitoring and surveillance of a partner (Burke, Wallen, Vail-Smith, & Knox, 2011; Lyndon et al., 2011); sending threatening or rude emails and messages (Bennet, Guran, Ramos, & Margolin, 2011; Hinduja & Patchin, 2011; Kellerman, Margolin, Borofsky, Baucom, & Iturralde, 2013; Zweig et al., 2013); and posting humiliating photographs (Hinduja & Patchin, 2011; Lyndon et al., 2011). Cyber dating abuse has been revealed as a prevalent problem, as Hinduja and Patchin (2011) found that approximately 10 % of adolescents reported their romantic partners had to give them explicit permission to participate in behaviors online and were otherwise threatened. Other studies have found that a range between 11 and 31.5 % of adolescents and young adults has been a victim of cyber dating abuse (Bennet et al., 2011; Hinduja & Patchin, 2011; Zweig et al., 2013). These abusive behaviors, much like offline stalking, can be extremely harmful to victims and cause a variety of emotional and psychological issues (Shorey, Stuart, et al., 2011; Shorey, Sherman, et al.,2011).

As can be seen above, these behaviors have received a variety of labels, but all encompass the same forms of violating behaviors. The present study will specifically look at the self-reported offending behaviors of university students who log into a partner's social media without permission from the romantic partner. As this form of online presence is very prominent in a majority of young adults' lives, it is not unexpected that it occurs frequently. The present study will investigate the possibility of explaining these unhealthy relationship behaviors by applying two popular criminological theories: General Theory of Crime and Social Learning Theory.

Theoretical Application

General Theory of Crime

Used frequently to provide predictors of various forms of physical and online crimes, General Theory of Crime asserts that low self-control is the predictive factor of criminality. According to Gottfredson and Hirschi (1990), individuals reared with ineffective parenting techniques, including poor supervision and monitoring, inconsistent discipline, and a decreased bond, had a higher likelihood to develop lower levels of self-control (Gibbs, Giever, & Martin, 1998; Gibbs, Giever, & Higgins, 2003). Individuals with low self-control focus on the short-term benefits of behaviors, and are also attracted toward self-serving behaviors that are impulsive and risky (Gibbs & Giever, 1995; Grasmick, Tittle, Bursik, & Arneklev, 1993). According to Gottfredson and Hirschi (1990), individuals with low self-control are unable to see the consequences of their actions:

> ...the dimensions [characteristics] of self-control are, in our view, factors affecting the calculation of the consequences of one's acts. The impulsive or shortsighted person fails to consider the negative or painful consequences of his acts; the insensitive person has fewer negative consequences to consider; the less intelligent person also has fewer consequences to consider (has less to lose). (Gottfredson & Hirschi, 1990, p. 95).

Not only has General Theory of Crime been shown to provide empirical support for cyberstalking (Holt & Bossler, 2009; Marcum et al., 2016; Reyns et al., 2012), it has also been a significant predictor of other forms of cybercrime such as digital piracy (Higgins, Fell, & Wilson, 2007; Higgins, Wolfe, & Marcum, 2008; Hinduja & Ingram, 2008) and hacking behaviors online (Bossler & Burruss, 2011; Bossler, Holt, & May, 2012).

Social Learning Theory

Social Learning Theory, based on the original concepts of Differential Association Theory, asserts that crime is a learned behavior. In Differential Association Theory, Sutherland (1939) argued that people commit crime because of Ban excess of definitions favorable to violation of law^ (as cited in Tibbets, 2012, p.142), with definitions equating to attitudes formed regarding the morality and legality of certain behaviors. Definitions are learned through interactions with intimate peer groups, which can include family and friends who have a significant impact on behaviors. This theory is one of the most supported criminological theories, and potentially one of the most understandable, as a relationship between criminal behaviors and delinquent peers Bis one of the most consistent findings in criminological research^ (Kubrin, Stucky, & Krohn, 2009).

The current-day Social Learning Theory, as described by Akers (1998), has four parts: (1) an individual's primary interactions with others in a group; (2) an individual's attitudes toward a behavior, including the techniques, rationalization, and drives to perform a behavior; (3) imitation of this behavior; and (4) reinforcement refers to the anticipated and actual rewards and punishments of participation in the behavior (Higgins

& Marcum, 2011). Social learning theory has received an extensive amount of support when explaining crimes in the physical world (Pratt & Cullen, 2000), and the theory has found support when explaining crimes in the online world as well (Bossler & Burruss, 2010; Higgins et al., 2007, 2008; Hinduja & Ingram, 2008; Hinduja & Ingram, 2008; Marcum, Higgins, Wolfe, & Ricketts, 2014a, b). Combining these two theories in past empirical studies has also indicated that individuals with lower levels of self-control gravitate toward deviant peer groups offline (Chapple, 2005; Longshore, Chang, Hsieh, & Messina, 2004) and online (e.g., Bossler & Holt, 2010; Higgins et al., 2006; Marcum et al., 2016; Wolfe & Higgins, 2009).

Present Study

The present study is an exploratory examination of university students' participation in cyberstalking, or the current technological invasiveness behaviors in relationships. This exploratory study will specifically investigate the act of logging into a significant other's social media, and specifically the theoretical predictors of this behavior. By using two classic criminological theories, we are attempting to determine if low self-control and deviant peer association are predictors of participating of impact perception of cyber dating abuse/cyberstalking behaviors while in romantic relationships by a university student sample.

Methodology

Design

A sample of 5000 undergraduate and graduate students enrolled at a mid-sized university in the Southeast was randomly chosen by the university's Office of Institutional Research, Assessment, and Planning. The sample of students was sent three waves of invitation to participate in a survey regarding their online behaviors. Recruited students received an email inviting them to participate in the study, also indicating that they would have the opportunity to enter their names in a drawing for a $50 VISA Gift Card after the completion of the survey (this was the only time identifying information – email address – was requested from participants). If they chose to continue participation, they then clicked on the link provided and immediately were taken to a page with the informed consent. If the recruited students still agreed to participate after reading the informed consent, they then continued on to complete the online survey. At the end of the third wave, 890 fully completed surveys of individuals in relationships were returned, equating to a 17.8 % response rate. According to Dillman (2007), an acceptable response rate for online surveys is approximately 10 %, so this goes beyond appropriate rate for analysis.

Measures

The dependent measure for this study is whether the individual attempted to login to significant other's social networking account without their knowledge. This is a single

item was measured using a Likert-type scale (1 = Never, 2 = Occasionally, 3 = Sometime, 4 = Many times, and 5 = all of the time).[1]

Low Self-Control

We used a number of independent measures to assess the correlates of this behavior. Specifically, we used an individual's level of self-control. Following previous research, we used the Grasmick et al. (1993) scale to capture self-control. Students indicate their level of self-control by responding to 24-items using a 4-point Likert-Type scale (1 = Strongly Disagree to 4 = Strongly Agree). The internal consistency of the measure was satisfactory 0.88. Higher scores on the scale indicated lower levels of self-control.

Higher Self-Control

In order to capture higher levels of self-control, we used Hirschi's (2004) measure. This measure was 9-items that were dichotomous. The examples of these items included whether the individual was committed to their education or whether the individual felt like their professor needed to know about their life. Each of the items were dichotomous 0 = no and 1 = yes. The internal consistency of the items was assessed using KR-20 and was acceptable 0.71. Higher scores on the scale indicated higher levels of self-control.

Peer Association

In addition, we included measure of the perception that their friends performed similar behaviors. Specifically, the students responded to items of whether they believed that their non-romantic friends used a tracking application with their romantic partner without their knowledge, whether their friend checked their romantic partner's e-mail without their knowledge, and whether their friend used their romantic partner's online accounts (i.e., social network or financial) without their knowledge. The students marked their perceptions of these behaviors using a dichotomous answer choices (i.e., 0 = no and 1 = yes). The internal consistency of the items was assessed using KR-20 and was acceptable 0.70. Higher scores on the items indicated the more that the students perceived that their friends performed these behaviors.

Control Measures

The students provided information about their biological sex (0) was for male and (1) for female. The students provided their age 1 = 18–20, 2 = 21–23, 3 = 24–26, and 4 = older than 26. The students provided their race by indicating whether they were white (1) or non-white (0). The students provided information about their grade point average by marking a five-point scale where 1 = 2.0 or below, 2 = 2.1–2.5, 3 = 2.6–3.0, 4 = 3.1–3.5, and 5 = 3.6–4.0, and higher scores indicated higher grade point average. The students provided information about their sexual orientation, BWhat is your sexual

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[1] We recognize the limitations of using a single item indicator. We liken our measurement to others that have examined different forms of hacking (Marcum et al., 2016); thus, we felt justified in our use of this measure.

orientation?^ It was coded as 1 = heterosexual, 2 = homosexual, 3 = bisexual, and 4 = unsure. In addition, the students marked whether they were an athlete 0 = no and 1 = yes.

Analysis Plan

The analysis will take place in a series of steps. The first step is an examination of the distribution of the measures; thus, we present the descriptive statistics. The second step was a correlation analysis. The correlation analysis shows the amount of shared variation amongst the measures. Further, the correlations will provide a first examination multicollinearity. The third step is a regression analysis. Because the distribution of the dependent measures were reasonably normal, we used ordinary least squares regression to determine the correlates of the impact of the negative relationship actions.

Results

Table 1 presented the descriptive statistics for these data. The average for attempted log-in to social media is 1.14. The average score for Hirschi's (2004) higher level of self-control is 1.36. In the sample, 96 % of the sample used social media or social network sites. The sample was 28 % female. The average age of the sample was 18 to 20 years old. Eighty 9 % of the sample was white. The average sexual orientation was heterosexual. The average GPA was 3.60 to 4.00. The average low self-control score was 50.76. The average peer association score was 7.00.

Table 2 presented the correlation analysis for the measures. In the correlations, low self-control has a link with attempted to login ($r = 0.25$), but Hirschi's (2004) version of self-control does not have a link with attempted login. Further, peer association does have a link with attempted login ($r = 0.01$). Further, being white has a negative link with attempted to login ($r = -0.12$). None of the additional correlations indicate that multicollinearity exists with these items.

Table 3 presents the regression analysis for low self-control as a correlate of attempted to login. For attempted to login, low self-control has a link (Beta = 0.01). This result is supportive of Gottfredson and Hirschi's (1990) contention that individuals with low self-control are less likely to see the consequences of their actions, in this situation attempted to login to someone else's account. Our results indicate that other measures (i.e., peer association [beta = 0.02], social media sites [Beta = 0.17], sex [Beta = −0.02], and white [Beta = −0.17]) that is counter to Gottfredson and Hirschi's (199) contention that only low self-control will have a link with criminal or deviant behavior.[2]

Table 4 presents the results for Hirschi's (2004) version of higher levels of self-control as a correlate of attempted login. The results indicated that five measures had a link with attempting to login. Hirschi's (2004) measure of self-control has a negative link with attempted to login. This suggested that those that have higher levels of self-

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[2] Because the dependent measure is captured using an ordinal scale, we attempted to perform plum analysis on the data. We obtained substantively the same results. These results are available from the third author on request.

Table 1 Descriptive statistics

Measure	Mean	Std. Dev.	Frequency	*n*
Attempted Login	1.14	0.45		
Hirschi's 2004 High Self-Control	1.36	1.59		
Social Media Sites Usage	0.04	–	0	32
			1	856
Gender	0.28	–	0	566
			1	224
Athlete	0.96	–	0	28
			1	763
Age	1.63	0.79	1	410
			2	294
			3	56
			4	32
Race	0.89	–	0	83
			1	706
Sexual Orientation	1.29	0.74	1	672
			2	30
			3	68
			4	22
GPA	1.84	0.94	1	350
			2	281
			3	107
			4	43
			5	10
Low-Self-Control	50.76	0.34		
Peer Association	7.00	0.05		

control are less likely to attempt to login (Beta = −0.02). This is supportive of Hirschi's (2004) premise that those with higher levels of self-control are not as likely to perform crime and deviance. Further, peer association (Beta = 0.03), social media sites (0.17), sex (Beta = −0.08), and White (Beta = −0.18) were also significant, and present a challenge to Hirschi's (2004) contention that self-control would be the only measure that has a link to crime and deviance. Regardless of the analysis, multicollinearity, via tolerance, was an issue in these data.

Discussion

The expectations and norms for romantic relationships for the new generation of young adults is completely different compared to past generations due to society's reliance on technology (Carpenter & Spottswood, 2013; Papp et al., 2013; PEW, 2013; Torres et al., 2013; Trepte & Reinecke, 2013). Individuals have become increasingly

Table 2 Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1. Attempted Login	1.00											
2. Low self-control	0.25	1.00										
	0.00											
3. Hirschi's Self-Control	−0.06	0.16	1.00									
	0.11	0.00										
4. Peer Association	0.01	0.08	−0.07	1.00								
	0.00	0.02	0.05									
5. Social Media Sites	0.06	−0.01	−0.04	0.02	1.00							
	0.09	0.77	0.25	0.60								
6. Gender	−0.07	0.09	0.25	−0.13	−0.04	1.00						
	0.06	0.01	0.00	0.00	0.24							
7. Athlete	−0.02	0.02	−0.04	−0.03	0.04	−0.03	1.00					
	0.68	0.65	0.33	0.48	0.31	0.37						
8. Age	−0.05	−0.10	0.12	−0.05	−0.01	0.07	0.07	1.00				
	0.18	0.01	0.00	0.13	0.82	0.04	0.06					
9. White	−0.12	−0.03	−0.08	0.00	0.05	−0.06	0.05	0.04	1.00			
	0.00	0.43	0.04	0.98	0.17	0.10	0.19	0.32				
10. Orientation	−0.00	0.03	0.07	−0.02	−0.00	−0.02	0.00	−0.03	−0.04	1.00		
	0.99	0.37	0.04	0.58	0.99	0.52	0.96	0.39	0.23			
11. Academic Rank	0.00	−0.13	0.05	0.01	0.04	−0.03	0.07	0.69	0.04	0.02	1.00	
	0.99	0.00	0.15	0.69	0.23	0.47	0.04	0.00	0.27	0.61		
12. GPA	0.05	0.08	0.20	0.04	−0.06	0.15	−0.03	0.02	−0.10	0.02	−0.03	1.00
	0.18	0.02	0.00	0.22	0.13	0.00	0.36	0.65	0.00	0.67	0.41	

*$p > 0.05$, **$p > 0.00$

Table 3 Ordinary least squares regression of low self-control on attempted login

Variables	Beta	SE
Low Self-Control	0.01***	0.00
Peer Association	0.02*	0.01
Social Media Sites	0.17***	0.03
Gender	−0.09***	0.03
Athlete	−0.02	0.12
Age	−0.01	0.02
White	−0.17**	0.08
Orientation	−0.01	0.03
GPA	0.01	0.02
Observations	781	
R-squared	0.09	

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

dependent on social media and other forms of technology to initiate relationships, communicate, and maintain a committed relationship status. However, the technological relationship is now producing a whole new way to violate and victimize a romantic partner, often without their knowledge. Cyberstalking, whether it be with a planted GPS, monitored bank account activity, or simply reading instant messages, has been a prevalent behavior in romantic relationships. This exploratory study has provided insight into the new phenomenon of the Belectronic leash^ (aka cyberstalking or cyber dating abuse as described in legal and criminological research terms) and provided theoretical support for predicting the behavior in young adults (Baum et al., 2009; Bocij & McFarlane, 2003; Burke, Wallen, Vail-Smith, & Knox, 2011; Lyndon et al., 2011; Marcum et al., 2016; Reyns et al., 2012; Sheridan & Grant, 2007).

Supporting past research linking low self-control to cybercrime (Bossler & Burruss, 2010; Bossler, Holt, & May, 2012; Higgins et al., 2006; Higgins et al., 2007; Higgins

Table 4 Ordinary least squares regression of Hirschi's 2004 higher self-control on attempted login

Variables	Beta	SE
Hirschi's Self-Control	0.02**	0.01
Peer Association	0.03**	0.01
Social Media Sites	0.17***	0.03
Gender	−0.08***	0.03
Athlete	0.00	0.12
Age	−0.02	0.02
White	−0.18**	0.09
Orientation	−0.01	0.03
GPA	0.02	0.02
Observations	781	
R-squared	0.04	

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

et al., 2008; Hinduja & Ingram, 2008; Marcum, Higgins, & Ricketts, 2014; Marcum et al., 2016), low self-control was found to be a significant predictor of attempted log-ins to a partner's social media. Respondents in the study with lower levels of self-control were more likely to attempt to infiltrate personal accounts and track their significant others without the knowledge of that person. This was supported by the application of Hirschi's (2004) measure of self-control, as offenders with higher levels of self-control were less likely to participate in the indicated cyberstalking behavior. What are the benefits of participating in this behavior? Offenders know exactly where their romantic partner is located, what he is doing, and whom he is with at that time. It is an impulsive behavior that has short-term benefits: satisfies curiosity, or a desire to control a romantic partner and her activities.

Results also indicated that university students who reported participating in cyberstalking via attempted log-ins to their partner's social media were more likely to be male. This is an interesting finding, as the majority of stalkers in the physical world (Corporate Alliance to End Partner Violence, 2016). In addition, self-reported offenders with an increased social media presence were more likely to participate in cyberstalking. This finding is not surprising, as it would be expected that an Internet user who has more online presence would be more comfortable with technology and possibly invading privacy without detection.

Results also indicated that deviant peer association was a significant predictor of this type of behavior, especially since this theory has been supported by multiple past studies as a predictor of various forms of cybercriminality (Bossler & Burruss, 2010; Higgins et al., 2007, 2008; Hinduja & Ingram, 2008; Holt et al., 2010; Hinduja & Ingram, 2008; Marcum, Higgins, & Ricketts, 2014; Marcum, Higgins, Wolfe, & Ricketts, 2015; Morris & Higgins, 2010). Individuals who participate in cyberstalking, much like most crimes, are more likely to have learned the behavior from peers, generally because their peers support the behavior (Sutherland, 1939). A past study by Marcum et al. (2016) utilizing a smaller sample of university students found that a large percentage of respondents believed their friends to participate in intrusive online behaviors while in a romantic relationship. In addition, past studies have indicated individuals with lower levels of self-control gravitate toward deviant peer groups, so there is a link between the two theoretical schools when explaining cyberstalking in university students (Bossler & Holt, 2010; Chapple, 2005; Higgins et al., 2006; Longshore et al., 2004; Marcum et al., 2014a, b; Wolfe & Higgins, 2009).

State governments, as well as federal legislatures, have begun funneling more resources into the fight against cyberstalking as it is recognized as a serious problem. States have enacted either new Bcyberstalking^ or Bcyberharassment^ laws, or have laws that included electronic forms of communication as an application to traditional stalking laws (National Conference of State Legislatures, 2012a, b). In addition, the federal government has passed legislation, such as the Interstate Communications Act and Federal Interstate Stalking Punishment and Prevention Act, to increase the severity of punishments for cyberstalkers and cyberharassers (Cox, 2014). Victims can also file a civil protection order, which provides protection faster than the criminal justice system or family court (Shimizu, 2013). The purpose of these orders is to deter abusers from participating in the continued threatening behavior, but also provide reliefs for the victim if custody or finances is an issue.

Despite the limitations (small sample size, geographical limitations to one area), the study does provide some insight into the electronic behaviors of individuals who are in relationships, as well as the theoretical predictors of cyberstalking behaviors. The

results from this study are able to make contributions in two areas. First, the study suggests the possibility of interaction effects between different levels of self-control may be viable directions for future research. In fact, some research suggests specific hypotheses about these types of interactions (see Jennings, Higgins, Akers, Khey, & DoBrow, 2013 for these hypotheses).[3]

Second, this exploratory study will hopefully provide support for universities and other youth-based organizations to develop programs and education on healthy relationships. University students and other young adults in the same age range are often very naïve to the possibility of this form of victimization, especially by someone they love and/or are in a romantic relationship. Individuals may not be aware they are being monitored or stalked, or aware that these are characteristics of unhealthy relationships. With follow-up studies further exploring this issue, we hope to contribute to a healthier lifestyle of young adults.

Based on what the literature does indicate, including the current findings, it is necessary to start better educating and informing adolescents and young adults on the repercussions of participating in negative relationship behaviors. High school students, as well as university students, could benefit from basic informational sessions on the following: 1) what behaviors constitute cyberstalking; 2) the frequency of the occurrence in current relationships; 3) the legal and social repercussions of participating in the behavior; and 4) psychological and emotional responses by victims to the behaviors. In addition, local, state and federal law enforcement could provide educational sessions on the criminal justice responses to the behavior and corresponding punishments.

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[3] An attempt was made in these data to address these hypotheses. The attempt was not successful. These results are available upon request.

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