

ABSTRACT

Title of Dissertation: CYBERSTALKING VICTIMIZATION: IMPACT AND COPING RESPONSES IN A NATIONAL UNIVERSITY SAMPLE

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Cyberstalking, or technology-aided stalking, is the use of electronic communications or tracking technologies to pursue another person repeatedly to the point of inducing fear. This study investigated the impact of cyberstalking victimization on psychological trauma and impairment of academic/career functioning, controlling for ongoing cyberstalking. Financial impact also was examined. The potential moderating relationship of resilient coping on the association between cyberstalking victimization and the outcome variables was explored. In addition, the study investigated the potential mediating relationship of perceived threat on the associations between victimization and: trauma, academic/career impairment, and formal reporting. The study explored relationships between the reported effectiveness of coping responses and: victim's sex, self-defined victimization, and type of prior relationship with pursuer. Finally, the study investigated predictors of cyberstalking victims' informal and formal reporting behaviors, as well as frequency of reporting, disciplinary outcomes for the cyberstalkers, and victims' reporting satisfaction.

Participants were 452 female and male, currently-enrolled, U.S. college/university undergraduate and graduate/medical/law students who responded to an online survey requesting individuals who had been stalked via technology. Results indicated that the

experiences of almost half (46%) of the university sample met legal criteria for cyberstalking victimization. Cyberstalking victimization predicted psychological trauma and impairment in academic/career functioning; significant predictors of both outcomes included self-defined victimization and the number of distinct cyberstalking behaviors experienced. In addition, prior dating/intimate partner-stalkers were predictive of psychological trauma, while unknown and female stalkers were associated with more academic/career impairment in university victims. The present study found no evidence for a moderating effect of resilient coping. Perceived threat was found to partially mediate the relationships between cyberstalking victimization and psychological trauma, impairment in academic/career functioning, and formal reporting. Coping response effectiveness was consistent with limiting one's exposure and accessibility; lack of effectiveness was characterized by contact with the pursuer. Coping responses were less effective for students whose victimization met legal definitions of cyberstalking and for those stalked by dating/intimate partners. A majority of students did not formally report victimization; approximately 14% indicated that formal reports resulted in disciplinary action for their cyberstalkers. Additional findings and implications for future research, practice, and policy/advocacy are discussed.

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IN A NATIONAL UNIVERSITY SAMPLE

By

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DEDICATION

For the victims/survivors with whom I have worked during my graduate years—residents at House of Ruth, patients at the Center for Posttraumatic Disorders at the Psychiatric Institute of Washington, and students and staff members who bravely came to the Victim Advocate Office at the University of Maryland during those first growing years...Each week, you reminded me that trauma has many faces and multiple layers. You inspired me with your courage and your resilience, and you taught me to have patience with and faith in the healing process as it unfolds, often through slow, subtle, but lasting revolutions of the spirit. Each one of you are in my heart and you will continue to guide me as I deepen my clinical practice in the coming years.

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CHAPTER 1: INTRODUCTION

Exponential advances in the development and use of computer and other technologies have provided exciting, constructive opportunities for people's advancement, productivity, and enjoyment. However, these remarkable advances also have generated new arenas and tools for victimization. A crime only recently identified by government agencies and the news media is cyberstalking, or technology-aided stalking, the use of any of a number of electronic communications or tracking technologies to stalk or harass another person. Despite increasing popular media coverage of Internet predator and hi-tech stalker stories, and a growing awareness about some of the threats that may accompany the new freedoms and connectivity of online social networks such as Facebook.com and MySpace.com, very little empirical work has been conducted to investigate the nature of and perceptions of cyberstalking behaviors on university campuses (or elsewhere), and virtually no research explores the impact on and coping responses of those who are victimized by these behaviors. The purpose of this study was to contribute foundational knowledge about cyberstalking experienced by university students nationally.

Terminology and Definitions

Cyberstalking

As with any relatively new phenomena, the terms used to describe the use of technologies in stalking and harassment are constantly evolving. The U.S. Attorney General (1999) used the term "cyberstalking" to identify a growing societal and law enforcement threat: "the use of the Internet, e-mail, or other electronic communications devices to stalk another person" (§ 3). The term "techno-stalking" (New York State

Senate, 2003) also has been introduced in an attempt to reflect and anticipate the broadest possible range of technologies that may be employed in stalking. For example, technologies such as text messaging, global positioning systems [GPS] and video/digital cameras might be excluded in some interpretations of the term “cyber,” which has come to be associated with the Internet and computers. The National Center for Victims of Crime’s Stalking Resource Center (Bahm, 2003) suggests the phrase “the use of technology to stalk” not only to ensure a broad scope for prosecuting stalking cases but also to emphasize the stalking behaviors rather than the technologies. This is done in an attempt both to prevent a dismissing of “cyber-” or “techno-” stalking as less serious than offline stalking and to eliminate barriers in the criminal justice process (e.g., law enforcement officers already trained in building stalking cases might hesitate to take “cyber”stalking cases because of their lack of computer expertise). Despite these valid concerns, this document uses the term “cyberstalking” for ease of communication and to match the language being used by students, the limited existing research, and the broader society.

Stalking

Led by California in 1990, legislators drafted anti-stalking statutes in every U.S. state, in the District of Columbia, and at the federal level by the end of that decade. This record law-making was the result of a confluence of pressures: long-term efforts on the part of domestic violence victim advocates were catalyzed by a growing public concern about stalking due to high-profile celebrity stalking cases and popular films like *Fatal Attraction* (Jaffe, Lansing, Lyne, Dearden, & Meyer, 1987; Mullen, Pathé, & Purcell, 2001). Legal definitions of stalking vary by state; to address this, the National Institute of

Justice (National Criminal Justice Association, 1993) developed the Model Anti-Stalking Code of States. The Code requires a high level of fear in victims but does not require stalkers to have made a credible threat of violence against victims. Stalking was defined as “a course of conduct directed at a person that involves repeated visual or physical proximity, nonconsensual communication, or verbal, written, or implied threats, or a combination thereof, that would cause a reasonable person fear” (p. 2). A shortened definition consistent with the Code is “a course of conduct directed at a specific person that would cause a reasonable person fear” (National Center for Victims of Crime, 2004, p. 1). Fisher (2001), incorporating the more stringent criterion existing in some statutes (i.e., a requirement that the perpetrator make a credible threat of violence against the victim), offered this definition: (a) a pattern of behavior that is nonconsensual or intrusive upon another person, (b) the presence of a threat, and (c) the intent to cause fear in the targeted person (Fisher, 2001). In the current study, *stalking* was defined as a pattern of behavior that (a) is nonconsensual or intrusive and (b) causes fear in the recipient of the behaviors. The additional criterion of the presence of a threat was investigated, but was not required to determine stalking victimization.

Cyberstalking Legal Statutes

With the exponentially increasing use of technologies in society, most states have begun to amend their existing stalking and harassment laws to include abuses of these technologies; currently, there are 45 such U.S. laws (Working to Halt Abuse Online, 2008). Examples of stalking via technologies include:

- sending threatening or unwanted emails, Instant Messenger (I-M) messages, beeper pages, or cell-phone text messages;
- using a person’s email address to subscribe her/him to multiple listservs or to purchase goods or services in her/his name;

- stealing a person's online identity to post false information;
- sending misinformation to chatrooms, Usenet groups, or listservs to humiliate someone and/or encourage other group members to harass, ostracize, or harm the individual;
- posting a person's demographic information or photograph to sexually-oriented or pornographic web sites;
- accessing, monitoring, and manipulating a person's computer while she/he is online;
- accessing bank accounts, student registration, telephone accounts, or other personal data available online;
- developing a website in "tribute" to a person;
- compiling online demographic information with an intent to harass, threaten, or harm a person either online or offline; and
- tracking a person through illegal wire tapping, caller identification, cameras, global positioning systems, or other tracking devices (Finn & Banach, 2000; Bahm, 2003; New York State Senate, 2003; Spence-Diehl, 2003).

It should be noted that many of the newer legal statutes governing the use of these behaviors address the misuse of "electronic communications," typically interpreted as computer misuse. Very few of the laws explicitly include other types of communications technologies such as text messaging, camera-phones, pagers, video cameras, or technologies used for tracking or monitoring individuals. For example, the harassment law in Maryland (MD Law 555C) has been amended to include the misuse of "electronic mail." As illustrated here, some of these amendments regarding the use of technologies appear with harassment laws, whereas others are attached to stalking statutes.

Furthermore, as noted above, there is a wide range in degree of specificity among these statutes in defining actual stalking and harassing behaviors (see "Cyberstalking Laws," Working to Halt Abuse Online, 2008).

Research Definitions of Stalking Victimization

Research definitions of stalking also vary. Almost all of the studies conducted to date have focused on offline stalking and generally have defined victimization as the experience of repeated, unwanted behavior that causes someone to be afraid or concerned

for her/his safety. The experience of a direct threat of harm (“credible threat”), a criterion for establishing criminal stalking in some states, typically is not required in research study definitions of stalking (e.g., Fisher, Cullen, & Turner, 1999, 2000; Tjaden & Thoennes, 1998). In fact, some researchers challenge the inclusion of this criterion, given that less than half of stalking victims receive direct threats yet all, by definition, experience a high level of fear (Tjaden & Thoennes, 1998). This study distinguished between cyberstalking experiences that met the minimum legal definition of stalking (i.e., a pattern of nonconsensual, intrusive behavior that causes fear in a targeted person) and cyberstalking experiences that did not meet the legal definition because of the absence of the condition of fear or threat. Throughout this document, these two categories of victims are referred to as the “cyberstalked” and “cyberstalked-no fear/threat” groups. The term “harassment,” used by other researchers to denote stalking behaviors of lesser degree or impact, was not used in the present study due to an intention to be as consistent as possible with existing legal definitions (while harassment statutes typically indicate a lesser crime in many states, their definitions can overlap heavily with stalking definitions, making it difficult to parse these two constructs well enough for research purposes).

Perception of Threat

Consistent with the foundational work of Fitzgerald, Gelfand, and Drasgow (1995) on sexual harassment, this study attended to these researchers’ caveat to distinguish legal concept from psychological construct. To view stalking as a psychological stressor is to remember the importance of understanding the victim’s perception of the situation. For example, different victims of the same stalking behavior might view the behavior as benign, irrelevant, or threatening. In the present study, this

construct was identified as *perceived threat* and was tested as an independent mediating variable.

Impact of Cyberstalking

A major interest of this study was to explore the impact of cyberstalking victimization on the lives of victims. Outcome variables that were investigated included psychological symptomology (i.e., posttraumatic stress symptoms), impairment of academic/career functioning, and, to a lesser extent, financial impact.

Coping

Another major purpose of this study was to better understand victims' responses in the face of cyberstalking behaviors that are seriously annoying, harassing, threatening, or otherwise psychologically/physically injurious. Coping, as defined in this investigation, consisted of behaviors and cognitions that victims of cyberstalking employed in response to these intrusions.

Need for Research on Cyberstalking in the University-Student Population

Research on offline (traditional) stalking indicates that college students are at high risk for stalking victimization, due to demographic and lifestyle characteristics (Fisher et al., 2000; Hall, 1998). Young adults constitute the largest group of victims (Hall, 1998), and individuals aged 18 to 29 represent 52% of stalking victims (Tjaden & Thoennes, 1998). Predictable routines of student class schedules and activities, easy access to campuses and campus housing/classroom buildings, and availability of personal information in student directories make students easy targets for stalkers, particularly stalkers who are themselves students (Fisher, 2001). Furthermore, college students developmentally are at an age highly focused on relationship-seeking and typically have

been socialized to associate romance with pursuit (Lee, 1998). A decade ago, a survey of university chief student affairs officers reported that more than one-third (34.5%) of them had to intervene in one or more stalking cases during the previous year; the likelihood of having to address a stalking problem increased with institution size (Gallagher, Harmon, & Lingenfelter, 1994). Additional studies have reported rates of stalking in college student samples ranging from 10.5% (Mustaine & Tewksbury, 1999) to 35.2% (Fremouw, Westrup & Pennypacker, 1997) for female students, from 14.7% to 18.4% for male students (Fremouw et al., 1997), and as high as 27% for mixed-gender samples (Spitzberg, Nicastro, & Cousins, 1998). Although these data substantiate college students' risk for stalking victimization, very little attention is given to stalking prevention or response on many college campuses (Tjaden & Thoennes, 1998).

College students' ubiquitous use of online communications and technology in general, combined with their age and lifestyle risk factors for stalking victimization, suggests they also will be particularly vulnerable to stalking/harassment via technologies (Finn, 2004). Flexible time schedules and ready access to computer technology contribute to students' higher risk in general for Internet problems such as dependency and addiction (Moore, 1995), characteristics that have been associated with some stalker profiles (see Lucks, 2001). In addition, the advent of online college social networks such as Facebook.com and CollegeDatebook.com, the increasing use of online communication channels (e.g., I-M, chat rooms) and electronic/digital technologies (e.g., cellular phone text messaging, tiny hand-held video and digital cameras), as well as easy access to spying and tracking technologies (e.g., Spyware programs, GPS devices on cell phones) have opened up new arenas for stalking and harassment.

The very medium of online communication may promote an environment conducive to cyberstalking. Walther (1997) found that online interactions are emotionally intensified and Finn (2004) observed that the Internet can create a false sense of relational intimacy and misunderstanding of intentions. The lack of nonverbal, historical, and contextual information available to individuals communicating online may encourage individuals to create idealized perceptions of others and to misjudge the intentions of the messages they receive (Finn, 2004). In addition, the disinhibiting and anonymous nature of the Internet has been associated with greater risk-taking and asocial behaviors, including deviant, deceptive, and criminal acts (Barak, 2005; Finn, 2004; Griffiths, 2000).

In addition to demographic and lifestyle characteristics, and the potential risks associated with high usage rates for electronic communications technology, college students also may be at risk for cyberstalking due to their own and others' misperceptions and minimalizations about stalking incidents. Alexy, Burgess, Baker, and Smoyak (2005) describe the dangers associated with such misperceptions:

Victims, perpetrators and authority figures (i.e., law enforcement officers, school administrators) often do not grasp the malicious nature of the crime until an individual is the victim of physical assault or personal property is damaged. Services for victims of offline stalking are insufficient, and for victims of online stalking, they are virtually nonexistent. (p. 280)

Understanding students' perceptions of the threat posed by online and other unwanted electronic communication behaviors contributes to efforts to inform and protect students from victimization.

In summary, although the research on stalking risk factors and prevalence in the college student population is in its infancy, it reveals a growing threat to the psychological and physical safety of students on college campuses. Given students' facility with and access to Internet and other electronic media, and given the emergence of some initial studies on the prevalence of Internet stalking/harassment behaviors, it is likely that a substantial number of university students will have experienced online harassment or stalking behaviors, even if, similar to the offline stalking data, the majority of incidents do not meet strict legal definitions of cyberstalking. Furthermore, some researchers (e.g., Alexy et al., 2005) suggest that lack of accurate perceptions regarding cyberstalking may contribute to students' vulnerability. Thus, this study sought to investigate cyberstalking victimization in a national university sample. While use of data from college students typically is criticized, this study viewed a university sample not as a convenience but rather as a vital contributor to knowledge about a population at increased risk for criminal victimization.

Need for Research on the Impact of and Responses to Cyberstalking Victimization

The fast-paced legal developments of the early 1990s quickly outpaced the knowledge base about stalking behaviors and, apart from some prevalence data and descriptive statistics, the majority of knowledge about this phenomenon is not empirically grounded (O'Connor & Rosenfeld, 2004). Furthermore, though academic work on stalking has flourished in the past five years, most of these published articles and books originate from a forensic perspective and focus primarily on the deviant stalker rather than the victim of the crime. Mental health professionals may have contributed to this lack of attention to victims' experiences in the stalking literature, for, throughout the 20th

century, they were involved in the assessment of perpetrators, reporting on cases of “erotomania” and delusional attachments (some of the earliest publicized stalking cases were attributed to individuals with erotomaniac delusions) (Mullen et al., 2001; O’Connor & Rosenfeld, 2004). In addition, the empirical work of mental health clinicians who *were* gathering data on victims (i.e., victims of relationship violence—now acknowledged to overlap greatly with stalking) was not reflected in the stalking literature until recently. As a consequence, the accumulated literature on stalking includes very little about the impact of stalking behaviors on victims.

Though stalking often is acknowledged as causing harm to its victims (e.g., Fremouw et al., 1997; Tjaden & Thoennes, 1998), “only a few studies have actually addressed the economic and social effects of stalking and even fewer studies have addressed the psychological or psychiatric consequences of stalking” (Blaauw, Winkel, Arensman, Sheridan, & Freeve, 2002, p. 51). Two national victimization studies have provided general data highlighting stalking’s significant impact on psychological and general life functioning. The Sexual Victimization of College Women survey (Fisher et al., 1999, 2000) found that psychological harm was the most common injury reported by stalking victims. In 95.1% of stalking incidents, victims indicated that they had been “injured emotionally or psychologically” (Fisher et al., 1999). The National Violence Against Women (NVAW) Survey (Tjaden & Thoennes, 1998) indicated that 30% of women and 20% of men surveyed had sought psychological counseling as a result of their stalking victimization, and many stalking victims experienced lost work time or lost jobs, or changed their work or social habits (also see Hall, 1998). Psychiatrists, psychologists, and contributors from other disciplines only recently have begun to

explore impact variables with more focused attention, examining their relationships with particular features of stalking victimization. Psychological and other impacts of stalking/harassment victimization are especially important to consider, given the levels of trauma and disruption to all areas of life potentially associated with these experiences. Contributions to this newer research arena are greatly needed.

While the offline stalking victimization literature is starting to develop and likely can contribute much to understanding and addressing the impact of cyberstalking, no known studies have yet considered the psychological impact of cyberstalking victimization in a college population (comparisons of cyberstalking and offline stalking on a number of impact variables have been explored in a community sample: see Sheridan & Grant, 2007; two articles on cyber-bullying in younger children have reported links between online harassment and depressive symptoms: see Beran & Li, 2005 and Ybarra, 2004). Furthermore, no studies of either offline or online stalking have addressed in any substantial way the effects of victimization on academic/career functioning, the most essential function of a university student, without which students face educational delays, disruptions or transfers, drop-out, less energy and motivation for career planning, and, potentially, more limited career options. Finally, while advocates who work with stalking victims indicate that cyberstalking often results in financial losses (e.g., new cellular phone service contracts, enormous cellular phone bills due to large numbers of incoming text messages, replacement of computers infected with Spyware, relocating costs, tuition for retaking academic courses, etc.), only one known study in the empirical literature has investigated this variable. Thus, *the first major focus of the study* was to

investigate the impact of cyberstalking victimization on psychological and academic/career functioning; impact on financial status also was investigated briefly.

In exploring the potentially dramatic effects of cyberstalking victimization, it also seems important to identify the methods that victims use to cope with the intrusive and potentially threatening cyberstalking behaviors they experience. The few existing studies that address coping responses do so in the context of offline stalking and focus on responses aimed at reducing or eliminating the stalking behaviors. Thus, *the second major focus of the present study* was to investigate the types of and effectiveness of coping responses used in the face of cyberstalking and their relationship to the unwanted pursuit behaviors, as well as coping's relationships with other key variables in the study.

CHAPTER 2: REVIEW OF THE LITERATURE

To provide a background for this investigation, research in the following areas was reviewed: (a) Nature and Perception of Offline Stalking in the University Population; (b) Nature and Perception of Cyberstalking in the University Population; (d) Impact of Offline Stalking Victimization; and (e) Coping With Offline Stalking and Cyberstalking. Methodological data for the specific studies have been included where available; a number of the investigations did not report this information (e.g., response rates, effect sizes).

Nature and Perception of Offline Stalking in the University Population

Nature of Offline Stalking in the University Population

Research suggests that offline stalking is a serious problem for young adults in general, and for college students in particular. Data from the NVAW Survey (Tjaden & Thoennes, 1998), a nationally-representative telephone survey of 8,000 U.S women and 8,000 U.S. men, indicated that individuals aged 18 to 29 are most at risk for stalking, representing 52% of all stalking victims. In this survey, the stalking definition closely resembled the Model Anti-Stalking Code for States (National Criminal Justice Association, 1993). The survey did not use the word “stalking” in its screening questions; only behaviorally-specific questions were used. Respondents who reported being victimized more than once were asked follow-up questions regarding how frightened they felt as a result of the behavior and whether they feared serious harm to themselves or someone close to them. Only victims who reported being very frightened or fearing bodily harm were counted as stalking victims.

The NVAW Survey (Tjaden & Thoennes, 1998) reported overall lifetime stalking victimization prevalence rates of 8% for women and 2% for men; annual stalking rates were 1% for women and 0.4% for men. When less stringent definitions of stalking were applied, that is, when victims who reported feeling somewhat or a little frightened were included, lifetime stalking victimization prevalence rates rose from 8% to 12% for women and from 2% to 4% for men; annual stalking prevalence rates also rose from 1% to 6% for women and from 0.4% to 1.5% for men. Across all age groups, stalking by acquaintances was more common than stalking by strangers. Women were the majority of stalking victims (78% of cases) and men constituted the majority of perpetrators (87% of cases). In addition, women were significantly more likely than men to be stalked by intimate partners (59% vs. 30%, respectively), and approximately half of perpetrators stalked their intimate partners during the relationship (in contrast with some assumptions that stalking is more common after a relationship has ended). American Indian/Alaska Native women were significantly more likely and Asian/Pacific Islander women were significantly less likely to report being stalked. Tjaden and Thoennes (1998) emphasized the need for further study of factors that contribute to different rates of stalking among specific racial/ethnic groups and also called for additional research focusing on intimate and acquaintance stalking rather than “celebrity” or stranger stalking.

A second national research survey, the Sexual Victimization of College Women study (Fisher et al., 1999, 2000), focused exclusively on the college-student population. The survey randomly sampled 4,446 women from 223 U.S. colleges and universities and found that 13.1% ($n = 581$) students reported having been stalked during the first seven months of the 1996-1997 academic year. In this study, stalking constituted repeated,

obsessive attention that would “create fear in a reasonable person” (p. 23). Participants were asked the following question:

Since school began in Fall, 1996, has anyone—from a stranger to an ex-boyfriend [note presumption of heterosexuality]—repeatedly followed you, watched you, phoned, written, e-mailed, or communicated with you in other ways that seemed obsessive and made you afraid or concerned for your safety?

Respondents who answered “yes” to the above question were asked additional questions regarding details of the stalking incident(s). Fisher et al. (2000), comparing their results to the results for women in the NVAW study (Tjaden & Thoennes, 1998), hypothesized that the lower prevalence rates reported by the NVAW survey may have been due to (a) the use of a more restrictive definition of stalking (i.e., higher level of fear required), (b) a life-span focus versus a focus on younger women among whom stalking is more prevalent, and (c) the fact that the study did not concentrate specifically on the experiences of college students. However, similar to the NVAW study (Tjaden & Thoennes, 1998), Fisher et al. found that restricting their criteria for stalking victimization resulted in greatly reduced prevalence rates. If stalking behavior was counted only when it was accompanied by actual threats of harm, the prevalence of stalking victimization among college women dropped to 1.96%. Also similar to the NVAW study, the majority of stalkers (80%) were known by their victims; these included boyfriends/ex-boyfriends (42.5%), classmates (24.5%), acquaintances (10.3%), friends (5.6%), and coworkers (5.6%). Infrequently, stalkers were college professors or teaching assistants.

Additional findings of the Sexual Victimization of College Women study (Fisher et al., 2000) included duration and location of the stalking, types of stalking behaviors, and risk factors for victimization. Stalking incidents, on average, lasted 60 days. Most stalking (70%) occurred on campus only or both on and off campus; the remainder (30%) occurred only off campus. Types of stalking behaviors reported included telephone calls (77.7%), waiting inside or outside places for the victim (47.9%), watching from a distance (44.0%), following (42.0%), letters (30.7%), and e-mails (24.7%). In 15.3% of incidents, victims reported that perpetrators either threatened or attempted to harm them; in 10.3% of incidents, stalkers “forced or attempted sexual contact” (p.28). Risk factors for stalking victimization included being in places with alcohol, living alone, being in a dating relationship (particularly early in the relationship, compared to being married or living with an intimate partner), being an undergraduate student, higher family socioeconomic status, and experience of a previous sexual victimization before the start of the current academic year. Similar to the findings for racial/ethnic groups in the NVAW study (Tjaden & Thoennes, 1998), American Indian/Alaska Native women were significantly more likely to be stalked and Asian/Pacific Islander women were significantly less likely to be stalked compared with women from other racial/ethnic groups. Finally, women attending colleges in small towns or rural areas were more likely to be stalked than women attending colleges in larger towns or non-rural areas; the authors hypothesized that stalking may be easier when a victim lives in a confined geographical area.

A third study, by Fremouw et al. (1997), explored the prevalence of stalkers and stalking victims among 593 college students. The researchers used the term “stalk” and

“stalker” in the survey items. Thirty percent of female student and 17% of male students reported that they had been stalked, compared to 1% (all males) who admitted to stalking others. Eighty percent of victims knew their stalkers and approximately 20% were stalked by strangers. More females (43%) than males had seriously dated their stalkers (24%).

A study by Mustaine and Tewksbury (1999), conducted in the Fall of 1996, surveyed 861 female students enrolled in introductory criminal justice and sociology courses in nine post-secondary institutions across eight states; the institutions included large and small universities, four-year colleges, and community colleges. The larger sample from which the sample in this study was drawn included 1,513 male and female students. The sample of female students was largely White/European-American (75.3%) with a mean age of 20.8. Stalking victimization was measured with a single, self-labeling item; participants were asked whether, during the six months previous to the study, they had been a victim of a behavior they defined as *stalking*. Ninety (10.5%) out of 861 women reported having been stalked. Mustaine and Tewksbury also found that a number of lifestyle/routine activities variables predicted stalking victimization in their sample; these included a high frequency of shopping at the mall, living off-campus, being employed, buying illegal drugs, and being drunk in public. Stalking also was more common for women who carried mace and pocket knives, a finding that the authors surmised might have been in response to having experienced stalking victimization.

Haugaard and Seri (2004) developed a construct similar to legally-defined harassment with adolescents and young adults in mind. Labeled *intrusive contact*, this construct explores behaviors that occur after the breakup of a romantic relationship. Defined as contact persisting a minimum of two weeks that is intrusive and against the

wishes of the person who expressly states that s/he wants the relationship to end, it includes such behaviors as phone calls and unwanted appearances. Haugaard and Seri tested their construct in a study with 790 undergraduate in social science courses at two medium-sized public universities in the eastern United States. The reported response rate was 80% (631 questionnaires were returned). The sample was 80% female and 20% male, the average age of participants was 20 years old, and class years were equally represented. The sexual orientation of the participants was 97% heterosexual/straight and the students overall were from intact, financially secure homes.

Results of the Haugaard and Seri (2004) study revealed that 8% of the 631 respondents stated that they had initiated intrusive contact toward someone, 20% had been the target of intrusive contact, and 1% had been both the target and the initiator of intrusive contact. Female students were more likely to have been targets of intrusive contact, but there was no relationship between sex and initiation of intrusive contact. No differences were found among initiators, targets, and non-reports on any variables related to family life, personal characteristics, or sexual/dating history. Initiators of the intrusive contact described the relationships they had with their targets as friendship (2%), dating relationship (9%), emotionally intimate (13%), or physically intimate (76%). Most of the relationships in which intrusive contact occurred had begun when the respondent was younger than 18 (i.e., high school relationships).

Spitzberg et al. (1998), using the construct of *obsessive relational intrusion* (ORI; Cupach & Spitzberg, 1998, 2001; Spitzberg & Cupach, 2001; Spitzberg & Rhea, 1999), highly consistent with legal definitions of stalking, aimed to explore the relationships among ORI victimization, symptomology, and coping strategies (results regarding

symptomology and coping strategies are summarized in the appropriate sections below). Participants were 69 male and 93 female heterosexual college students enrolled in communication courses at a large southwestern public university. In response to a direct question of whether they ever had been “stalked,” 27% of the students reported “yes.” No gender differences were found for ORI victimization.

Spitzberg and Hoobler (2002) also tested the ORI measure. Their sample consisted of 235 undergraduate communication students at a large southwestern public university. The sample was 55% female and 43% male, an average of 22 years old, and 75% White/European American. Participants were asked whether they had been followed, harassed, and/or obsessively pursued by someone during some period of their lives. Of the students surveyed, 59% percent answered yes to this question; 19.6% said that their experiences had been threatening or had placed them in fear of their own safety or the safety of family, friends, or possessions; and 14.5% labeled what they had experienced as “a form of stalking.” Students reported that the average duration of their experiences of unwanted pursuit was 4.24 months.

Perception of Offline Stalking in the University Population

Westrup, Fremouw, Thompson, and Lewis (1999), as a result of their investigation of the psychological impact of stalking on female undergraduates (described in greater detail below), emphasized the need to fine-tune the definition of “stalking.” The participants in their study were 127 students from psychology courses at West Virginia University. Based on their responses to the survey, the women were divided into a stalking ($n = 36$), a harassed ($n = 43$), and a control group randomly drawn from a larger pool of 77 non-victims ($n = 48$). The stalked group indicated that they had been

intentionally and repeatedly followed, harassed, and/or threatened by someone and identified these behaviors as stalking; the harassed group endorsed having experienced these behaviors but did not identify as having been stalked; the control group had never been stalked but had experienced a significant relationship (i.e., longer than 6 months).

The researchers (Westrup et al., 1999) found a significant difference between individuals who labeled themselves victims of stalking and those who considered themselves to have been harassed but not stalked. Self-labeled stalking victims, compared to self-labeled harassment victims, reported experiencing more intrusive and more threatening behaviors. Participants who saw themselves as “stalked” indicated that they had received more harassing phone calls, property damage, verbal threats, assaults, and incidents of being followed. Stalked participants also experienced more psychological symptoms than harassed students. Westrup et al. (1999) emphasized the need for further research to help clarify the factors that contribute to individuals’ labeling of their victimization as “stalking” versus “harassment.”

Phillips, Quirk, Rosenfeld, and O’Connor (2004) conducted two experiments with college undergraduates to analyze the extent to which stalking behaviors, victim-perpetrator relationships, and gender (of both the stalking vignette characters and the study participants) influence judgments about whether stalking has occurred and the potential risk posed to victims. In the first experiment, the sample included 120 students from introductory psychology courses at a large private university in the northeast United States. The sample was 34.2% male and 65.8% female; the race/ethnicity of the sample was primarily Caucasian (79.2%) with a minority of Hispanic participants (10.8%) and Other or multiple racial/ethnic backgrounds (9.2%). Participants rated vignettes, one of

which was a stalking vignette involving a male and female interaction; the gender of the perpetrator and target and the type of relationship between the two individuals (e.g., stranger, acquaintance, and a previous romantic relationship or former intimate) were varied across participants. Students indicated whether the behavior described in the vignette constituted stalking. In addition, participants were asked whether they had “ever been stalked” or “ever been repeatedly followed (i.e., more than once) and/or harassed by another person” (the wording of the question was varied across participants to test whether the term *stalking* influenced students’ perceptions of their own experiences).

Results of the first experiment by Phillips et al. (2004) showed that participants were less likely to apply the label of stalking to scenarios in which the characters described had been involved in an intimate relationship compared to those in which the characters had been acquaintances or strangers. Female participants were no more likely than male participants to apply the *stalking* label, and the gender of the perpetrator and target in the vignettes did not affect whether the scenario was viewed as *stalking*. However, the gender of the perpetrator and target did influence perceptions of safety for the target; male perpetrator-female target scenarios were associated with more concern about the safety of the victim and about meeting with the perpetrator, and with beliefs that the victim should seek help from the police/security force. In addition, prior experience of stalking victimization was not related to labeling. Of the participants, 27 (22.5%) indicated that they had been stalked, with 12 reporting that they had been stalked by more than one individual and 7 indicating that they had had more than two different stalking experiences. The proportion of students endorsing having been “stalked” versus

having been “repeatedly followed and/or harassed” did not differ. Gender differences also were not significant for stalking victimization.

In the second experiment by Phillips et al. (2004), the sample included 376 undergraduate and graduate students from an urban, public college with a focus on criminal justice. The gender of the participants was (66%) women and (33%) men; the average age of the sample was 24.2 years. The racial/ethnic composition of the sample was Caucasian (30.6%), Latino (28.3%), African American (19.7%), Other (12.5%), Asian (5.9%), and missing (3.3%). Participants rated one of six possible vignettes about a man and a woman who meet at a party; stalking behaviors in the different scenarios varied by gender of the perpetrator and target and by degree of criminality as defined by New York State law. The researchers reported that the severity of the stalking behaviors described in the vignettes influenced participants’ perception that the behavior constituted stalking, that the behaviors constituted a crime, that the perpetrator might hurt the target, and that the stalker’s behaviors was caused by a mental illness. Gender of the perpetrator/stalker in the vignette was not related to the labeling of the behaviors as *stalking* or as criminal, but was related to perceptions of whether the stalker might hurt the target (violence was perceived as more likely with a male perpetrator and female target compared to the reverse). A small effect of participant gender was found for labeling the behaviors as *stalking* (more women viewed the behaviors in the vignettes as *stalking*). Finally, participants were able to distinguish the stalking and no-stalking scenarios consistent with state law.

Summary: Nature and Perception of Offline Stalking in the University Population

The existing research on stalking indicates that university students are at particular risk for victimization, with rates as high as 27% for mixed-gender samples (Spitzberg et al., 1998) and 35% for female students (Fremouw et al., 1997). Definitions of the criteria for stalking victimization in particular (e.g., requirement of the threat of harm, experience of fear) have been found to influence prevalence outcomes significantly, with stricter criteria reducing the rates of stalking. Researchers generally urge the importance of employing behavioral descriptions rather than the word “stalking” to account for potential differential interpretations of the word, but one study did not find any differences in reporting based on the behavioral versus “stalking” description. Reference periods for stalking experiences ranged from six months to one’s lifetime across the various studies; it is unclear if this difference influenced prevalence rates.

The studies reviewed in this section, including two national surveys, appear to provide overwhelming evidence that perpetrators are most often intimate partners or acquaintances rather than strangers; furthermore, some of the articles reported higher rates of stalking early in dating relationships and in relationships that involved physical intimacy. Among those research investigations that included both male and female student participants, half found that women were more likely to be victims and half found no gender difference. Both national surveys found racial/ethnic differences in victimization, with American Indian/Alaska Native women most likely and Asian/Pacific Islander women least likely to report having been stalked. Risk factors for victimization that were common across more than one study included alcohol proximity or use, and younger age (e.g., undergraduate versus graduate, stalker an ex-dating partner from high

school); risk factors inconsistently related to victimization were living on versus off campus, family socioeconomic status, and previous sexual victimization.

With regard to perceptions of stalking behaviors, self-labeled stalking victims were found to experience more intrusive/threatening behaviors and more psychological symptoms than students identifying as harassed. Judgments that stalking occurred were influenced by the perceived severity of the behaviors, the described relationship of the victim and perpetrator (behaviors in the context of intimate relationships were less likely to be labeled stalking), and, to a small extent, gender (women were somewhat more likely to label behaviors as stalking). College students were equally open to labeling men and women as victims, although more concerns were expressed for the safety of female versus male victims.

Nature and Perception of Cyberstalking in the University Population

Nature of Cyberstalking in the University Population

While there is limited yet compelling evidence of college students' high risk for stalking victimization, and a growing awareness in society of the dangers of online stalking, only a few empirical investigations have been conducted regarding the nature of cyberstalking (or cyber-harassment) in the college population. Six total studies related to this topic exist in the empirical literatures of a number of disciplines (criminal justice, communication, nursing, public health, education, and social work). Of the published investigations that have addressed cyberstalking experiences of college students, the majority do so as a part of broader research questions; only four studies (Alexy et al., 2005; Finn, 2004; LeBlanc, Levesque, Richardson, & Berka, 2001; Spitzberg & Hoobler,

2002) have made it the focus of their investigations. All known studies are described below.

The national Sexual Victimization of College Women study detailed above (Fisher et al., 1999, 2000), which defined stalking as repeated, obsessive, fear-inducing attention, reported that one quarter of their stalking victims had been stalked via email. The largest percentage of stalkers in this study (42.5%) were boyfriends or ex-boyfriends, although data about which stalkers used e-mail were not provided.

Goodson, McCormick, and Evans (2001) reported on online sexual harassment experiences of students in their investigation of college students' behaviors and attitudes when searching for sexually explicit materials online. Their sample included 506 undergraduates in upper-level health classes in a large, public Texas university. The majority of the students were female (61.9%) and the mean age of the sample was 25 years. Racially/ethnically, the sample was largely Non-Hispanic/White (46.8%) and Hispanic/Mexican American/Latino-a (41.6%). Goodson et al. found that, in student reports of their experiences in sexually explicit chat-groups (12.8% of students had participated actively in discussions and 25.8% had been silent observers), 5% said they sometimes had posted objections to distasteful sexually explicit chat-group conversations and 15.8% of students reported that they had felt sexually harassed during these interactions. Female students were more likely to report this complaint. Another finding of the study was that that 12.1% of students reported having had cyber sex with a partner; although significant differences were not found between men and women, slightly more women reported having cyber sex with an online partner. While cyber sex is not directly related to stalking/harassment, this finding provides additional context for the online

experiences of college students. Citing another study, by Park and Floyd (1999; found that significantly more women than men in online newsgroups initiated personal relationships, with many of these relationships evolving into offline friendships and partnerships), the authors discussed the possibility that women may be more willing to explore online relationships and sex initially due to the anonymity and relative absence of physical harm. It is also possible, however, that online exposure and relational/sexual initiation behaviors may be a risk factor for women (and for men) for both online and offline victimization, as is indicated by the sexual harassment experiences of the students in the sexually-explicit chat-groups.

In the first known empirical investigation of cyberstalking, LeBlanc, Levesque, Richardson, and Berka (2001) conducted a survey at Worcester Polytechnic Institute (WPI) during the spring of 1997 to assess the prevalence of stalking via the use of e-mail and the Internet among the university's students, faculty, and staff. Surveys were sent to 600 undergraduate and 142 faculty and staff members; the return rate for students was 28.7% (172 respondents) and the return rate for faculty and staff was 9.1% (13 respondents). Participants were provided with the definition of stalking as defined by Massachusetts state law and then asked to identify whether they had been stalked or had ever stalked someone. Follow-up questions were asked regarding methods employed by the stalker and how the stalker obtained information about the victim. Of the 172 students, 3 males and 21 females (14% of respondents) reported having been stalked; five male students and one female student (4% of respondents) reported having been a stalker. Two students (one male and one female) indicated they had been both victims and stalkers. Stalking via e-mail was reported by 14 (57%) of the students and three (13%) of

the students believed that their stalkers had obtained their information from Web utilities (e-mail, homepages). E-mail stalking ranked fifth in frequency of stalking methods; the most frequently used stalking methods were offline behaviors (following, inquiring through friends, repeated phone calls [cell phones were not widely used at the time], and physical contact). In addition, the Web played almost no role in campus stalking behaviors, a finding explained by the researchers as possibly due to the existence of computer network monitoring by the university.

During the same time period, Spitzberg and Hoobler (2002) initiated a project to define and operationalize cyber-pursuit and developed a self-report measure of cyberstalking victimization and risk (information about the sample provided above). A focus of the study was the exploration of the relationship between electronic stalking behaviors and “real life” stalking behaviors (obsessive relational intrusion; ORI; Cupach & Spitzberg, 1998, 2001; Spitzberg et al., 1998). In the survey questionnaire, students were asked about their experiences of being “obsessively pursued through electronic means (computer, e-mail, chat room, etc.) over a period of time for the purpose of establishing an intimate relationship that you did not want.” Almost one-third of the participants indicated some degree of computer-based harassment and obsessive pursuit; very few students were victimized by more extreme forms of pursuit (e.g., electronic identity theft, pursuer directing others to threaten the victim, etc.). Frequencies for the most commonly experienced pursuit behaviors were as follows: being sent tokens or exaggerated messages of affection (31%), being sent excessively disclosive or excessively needy/demanding messages (25%), having pursuer pretend to be someone s/he wasn't (20%), being sent pornographic/obscene images or messages (19%), being

sent sexually harassing messages (18%), and having private information exposed to others (17%). Results of the study indicated small to moderate relationships between online and offline obsessive relational intrusion. In addition, the more students were involved online and with other electronic media, the more at risk they were for experiencing unwanted electronic/online pursuit.

The third investigation that explicitly studied cyberstalking/harassment was the Survey of Online Harassment (Finn, 2004). Conducted at a public university in the Northeast, this study surveyed 339 undergraduates. Students were predominantly White (93%), the majority lived on campus (64%), and 4.8% (n = 16) of the students identified as gay, lesbian, bisexual, or transgender (GLBT). The study focused on repeated incidents of online harassment, defined as “repeated messages that threatened, insulted, or harassed” (Finn, p. 472); the criterion of fear was not applied in this study. The results of the study showed that 10-15% of students had experienced online harassment. Harassment was received though both e-mail and I-M messages, with the highest proportion coming from strangers (16.2% by e-mail and 19.3% by I-M). Harassment by email and I-M continued despite requests to the senders to stop (14.1% of students continued to receive harassing email and 13.1% continued to receive harassing I-M messages). No differences in online harassment were found for gender, age, race, class standing, or residence (i.e., on- or off-campus). In addition, frequency of Internet use was not associated with online harassment. However, e-mail harassment was more prevalent for individuals identifying as GLBT. Approximately one-third of GLBT students, compared to 14.6 of heterosexual students, reported receiving repeated e-mails from someone they did not know or barely knew. Similarly, 37.5% of GLBT students,

compared to only 13.1% of heterosexual students, indicated they continued to receive e-mails after telling their harassers to stop. No differences were found with regard to sexual orientation for e-mail harassment by acquaintances or significant others, or for I-M harassment.

A fourth study, by Alexy et al. (2005), explored Internet usage, cyberstalking and stalking victimization experiences, and cyberstalking perceptions of 756 undergraduate and graduate students from two Mid-Atlantic universities (the cyberstalking perception results are presented in the section below). The mean age of participants was 20.7. The gender distribution of the sample was 54.8% male and 45.2% female. The race/ethnicity of the students was Caucasian (72.9%), Asian (13.0%), African American (5.9%), Hispanic (3.9%), and biracial/multiracial/other (4.4%). Twelve percent of the participants were the first in their families to attend college. Results indicated that 28 of 756 students had been a victim of cyberstalking; this number represented 3.7% of the total sample and 31.5% of those who reported experiencing offline stalking (inclusion criteria for these groups were not indicated). Most of the cyberstalkers were classmates or former intimate partners of the victims. Cyberstalking victimization was related to other types of stalking behaviors (e.g., letters, telephone calls, being harassed or followed, being sexually threatened, and received physical injury threats). Cyberstalking victims, compared to offline stalking victims, were more likely to have received threats, to have a perpetrator threaten suicide, to experience theft of personal items, and to screen phone calls. The stalking locations reported by students were at home or in the residence halls (82%) and at school (54%). The races of the perpetrator and victim were the same in 79% of the stalking cases. Female students, compared to male students, were significantly more

likely to be stalked offline, while male students, particularly Caucasian men, were significantly more likely to be cyberstalked. Cyberstalked individuals were more likely than offline stalking victims to have received threats and threats of suicide from the stalker and to have had personal items taken; cyberstalking victims also were more likely to screen phone calls and not contact or respond to the police.

Perception of Cyberstalking in the University Population

How students perceive cyberstalking may influence both the impact of cyberstalking victimization and the types of coping responses used in the face of unwanted pursuit behaviors. The few studies that have been conducted to assess college students' perceptions of cyberstalking are summarized in this section.

Alexy et al. (2005), whose study was introduced above, explored students' perceptions of cyberstalking as part of their survey. Students reported their reactions to a scenario based on one of the first prosecuted cyberstalking cases that involved an online friend who requests but is respectfully denied an in-person meeting; over the next few days, the friend who declined the invitation received several obscene messages and solicitations via e-mail and had strangers knocking on the door in the middle of the night saying they "want to make your fantasy come true." Further investigation revealed that the declining friend's name, telephone number, and address had been posted on a pornographic Internet newsgroup with the message, "I fantasize about a stranger entering my house and forcing himself/herself upon me."

Results of the study revealed that the above scenario, which detailed the behaviors of a convicted cyberstalker, was labeled as *cyberstalking* by only 29.9% of the college students. Indeed, 7.6% of the students did not even label the behaviors *harassment*. A

majority (69%) of students did perceive the scenario as “physically threatening” or worse and 73% said they would report these behaviors to the police. The researchers surmised that the students’ strong reactions to the scenario may have been related to the presence of offline as well as online stalking elements. Student members of fraternities and sororities were more likely to label the scenario as *stalking* versus *harassment*, while students who had experienced stalking at school were less likely to label the scenario as stalking and more likely to label it as harassment. In addition, the authors reported a surprising finding regarding students who had attended an educational program on interpersonal violence; these students were more likely to label the scenario behaviors as *harassment*. Finally, students who themselves had experienced longer episodes of stalking were less likely to label the scenario as *stalking*. The authors attributed these results to the possible reluctance of stalking victims to assume the identity of “victim” due to self-protective coping mechanisms.

The study also investigated the interactions of labeling, feeling, and behavioral reaction; more intense feelings were found to be related to stronger behavioral reactions. Women were more likely than men to report more severe feelings and stronger reactions, while seniors were less likely to express more severe feelings. More severe feelings also were reported by students who knew a rape victim and by those who felt that sexually-explicit material online is a growing problem. By contrast, students who reported less severe reactions were students who had been stalked, who had received threats of physical violence through e-mail, and who had received letters in the mail as part of their victimization; the authors hypothesized that a “numbing” effect may have been present for these students who had themselves experienced stalking.

Another study, by Biber, Doverspike, Baznik, Cober, and Ritter (2002), explored differences in the perception of sexual harassment in relation to both gender and the medium of discourse: a traditional classroom setting versus an online environment. Participants were 270 undergraduates (143 female, 127 male) recruited from classrooms and the college community at a large, Midwestern university. The mean age of the students was 22.95. Students reviewed brief scenarios involving a male professor and a female student (a “friend of yours at the University”) named Jane and then were asked to rate whether the scenarios constituted sexually harassing actions. The study found that misogynist comments, use of sexist nicknames, and comments about dress were seen as more harassing online than in a traditional classroom setting. The only behavior seen as more harassing in a traditional classroom setting was the professor asking the student to keep him company. With regard to gender, women rated online pictures, jokes, and requests for company as more harassing than men. In their discussion, Biber et al. indicated surprise that participants had held not more relaxed but rather more stringent standards for online behavior. The authors interpreted the gender results as suggesting that women in particular may be acting cautiously relative to traditional settings in defining the parameters of sexual harassment online; they pointed out, however, that overall standards for judging online and traditional behavior were similar for men and women. In addition, Biber et al. commented that some types of harassment may seem more threatening online because there is less context to justify the behaviors and the written medium may imply that more thought and seriousness have been put into the behaviors.

Summary: Nature and Perception of Cyberstalking in the University Population

The research literature discussed above highlights the existing knowledge regarding the nature and perception of cyberstalking in university student samples. As was addressed in the commentary on offline stalking, definitional clarity and consistency across studies is essential so that results can be compared in a meaningful way and programmatic research can be established in this field. The first studies used varied definitions of cyberstalking/cyberharassment that are not entirely consistent with existing stalking and cyberstalking laws. Spitzberg and Hoobler (2002) have contributed a needed foundation for this field of study with their cyber-obsessive relational intrusion construct, consistent with most legal definitions of stalking.

Prevalence rates of cyberstalking vary widely depending on how the stalking is defined (e.g., which behaviors are included, whether elements of fear are included, etc.). Reported rates for online stalking range from 3.7% to 30%; three studies reported rates of approximately 15%, though the behaviors queried ranged from sexual harassment to harassment to stalking. The studies that requested that participants respond to detailed lists of stalking behaviors had rates that ranged from 15% to 30%; more extreme forms of pursuit appear to be rarer in the college student population. E-mail and Instant Messenger (I-M) are among the most frequently used methods of stalking/harassment in those studies that reported these data.

Similar to studies of offline stalking, specific demographic, behavioral, and relational factors have been investigated to discover their potential relation to cyberstalking. Evidence appears mixed regarding the relationship status of stalkers (either stranger or acquaintance/intimate partner). No consistent results were found regarding

gender; although some studies continue to show women being more likely to perceive and experience victimization, others find either no gender differences or higher rates of men experiencing cyberstalking. LGBT students were found in one study to experience considerably higher rates of persistent online harassment from strangers compared to their heterosexual peers. Online exposure and initiating behaviors online may be risk factors for negative experiences online, including stalking. Finally, while there are clearly differences between the two, there appears to be a consistently demonstrated relationship between online and offline stalking victimization.

Studies exploring how college students perceive stalking behaviors suggest important cognitive variables that may play a role in how students evaluate potential and actual cyber-victimization experiences. The research summarized in the above sections indicates that there can be discrepancies between how a student labels stalking versus how threatening that stalking is perceived to be; one factor that may influence labeling includes the length of the stalking episode. Factors that may influence the perception of threat include the online medium itself (e.g., due to a lack of context online or more thought ascribed to written text) and previous online or offline stalking experiences (decreased threat, perhaps due to a numbing effect of victimization).

Impact of Offline Stalking Victimization

The research studies included in this section document the impact of primarily *offline* stalking on victims, specifically, the psychological, academic/career, and financial consequences of victimization (one published study comparing offline stalking and cyberstalking has explored these impact variables). Psychological impact, primarily

posttraumatic stress, is discussed first, followed by impact on academic/career functioning, and then impact on financial status.

Psychological Impact

The articles discussed in this section are among a small group of research projects that have investigated the psychological consequences of stalking victimization. The majority of the empirical studies reviewed here investigated psychological impact variables (in many cases, posttraumatic stress symptoms) using either standardized instruments/criteria or exploratory measures whose psychometric properties were being evaluated (e.g., ORI Symptomology measure; tested in Spitzberg et al., 1998; Spitzberg & Rhea, 1999). Two exceptions to this are the Sexual Victimization of College Women national survey (Fisher et al., 1999, 2000), which included a single item regarding psychological impact, and the study comparing offline stalking and cyberstalking (Sheridan & Grant, 2007), which used a previously untested, author-generated list of personal and medical sequelae. The section is organized into three sub-sections to reflect the types of samples used: (a) community samples, (b) mixed community/college student samples, and (c) college student samples.

Community samples. One of the first published studies to focus on the psychological impact of stalking on victims was that of Pathé and Mullen (1997). Their Australian sample drew from a wide cross-section of the community and included 100 victims of stalking (83 female and 17 male) who had experienced more than one form of intrusive behavior and multiple episodes of stalking over a minimum of one month; 52 of the 100 victims were experiencing ongoing stalking. Stalkers of the victims were professional/work-related colleagues (34%), ex-partners (29%), casual social

acquaintances (21%), and strangers (16%). In fourteen cases (10 female, 4 male), the stalker was the same sex as the victim. Results of the study showed that a majority of stalking victims reported deterioration in their mental health since the onset of their stalking victimization. Symptoms included: heightened anxiety levels, chronic sleep disturbance, appetite disturbance/weight changes, excessive tiredness, intrusive flashbacks of the stalking, and emotional detachment/estrangement from others. The researchers indicated that 37% of victims met the diagnostic criteria for posttraumatic stress disorder (PTSD; Diagnostic and Statistical Manual of Mental Disorders [DSM]-IV, American Psychiatric Association, 1994) and that an additional 18% met all criteria with the exception of stressor A(1), that is, actual or threatened physical harm to the victim or a significant other of the victim. Of the 55 participants who met or almost satisfied the DSM-IV diagnosis criteria, 49 were female. Victims were more likely to experience posttraumatic symptoms if (a) the stalking behaviors included following or surveillance, (b) they were exposed to violence, or (c) they had a prior intimate relationship with the stalker. Finally, 24% of participants reported that they seriously considered or attempted suicide sometime during their stalking victimization and 75% expressed overwhelming feelings of powerlessness.

A more recent study by the above researchers (Purcell, Pathé, & Mullen, 2005) investigated the association between stalking victimization and psychiatric symptoms in a random community sample. Participants were 1,844 men and women randomly selected from the electoral roll in the Australian State of Victoria and were representative of the base electoral population with regard to gender, marital status, education level, and employment and occupational status (the sample was less representative of the population

with regard to age of participants; fewer individuals aged 18-25 years and more individuals aged 56 years or older participated). The response rate for the survey was 61%. The survey used a behavioral definition of harassment/stalking and asked participants whether they ever had experienced any of a list of behaviors (e.g., being followed or kept under surveillance; receiving unwanted approaches, items, telephone calls, letters, faxes, e-mails; having their property interfered with). Respondents were classified into three groups: (a) a “short-lived harassment” group ($n = 196$), (b) a “protracted stalking” group ($n = 236$), and (c) matched controls who had never experienced harassment ($n = 432$). Those participants who had experienced two more intrusions that induced fear were classified as victims; duration of the harassment was used to further delineate the victims into the short-lived harassment group (up to two weeks) and the protracted stalking group (two or more weeks). The victim group was largely female (75%), young (43% aged 16-30 years), and employed (76%). The study found that stalking victims, compared to short-lived harassment victims and controls, had significantly higher rates of general psychological symptoms, severe depression, and suicidal ideation (as measured by the General Health Questionnaire, GHQ-28; Goldberg & Hillier, 1979). Victims of stalking also had significantly higher total scores ($M = 12.9$, $SD = 17.7$ for the stalked group vs. $M = 5.2$, $SD = 10.6$ for the harassed group; $t = 5.5$, $df = 426$, $p = .001$) on the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979). Furthermore, stalking victims were three times more likely to meet the threshold for caseness (i.e., level of symptoms similar to individuals seeking professional mental health services) on the IES. Among victims of protracted stalking, posttraumatic symptoms were higher among those victimized in the previous year and for those subjected to

explicit threats. The number of harassment methods was not correlated with either general psychological symptoms or posttraumatic symptoms for the brief harassment and stalking groups. Finally, the prior relationship with the stalker was not associated with psychological or trauma symptomology. In this sample, the perpetrators were, in decreasing order of frequency, casual acquaintances (30.3%), work contacts (22.2%), ex-intimate partners (21.4%), strangers (17.5%), and estranged relatives or friends (8.5%).

Kamphuis and Emmelkamp (2001) surveyed 201 female members (ages 20 to 70) of a Dutch nationwide support center for victims of stalking. Participants were included if they had experienced multiple repeated stalking behaviors and if they identified with Meloy and Gothard's (1995) stalking definition: "the willful, malicious, and repeated following of another person that threatens his or her safety." Results of this study indicated that over half (59%) of the stalking victims were experiencing clinically significant levels of psychiatric symptoms, with participants' traumatic symptom levels comparable to those of other traumatic experiences (e.g., bank robberies, battering). Nearly 75% of victims received threats of violence and 50% of the women experienced direct violence. Most of the stalkers were male (89%); eleven cases involved female stalkers (5%). Stalkers were ex-partners of the victims in 73% of the cases, however, the type of previous relationship victims had with their stalkers (e.g., intimate, professional, stranger) had no bearing on symptomology.

In another study from the Netherlands, Blaauw et al. (2002) sought to assess the degree to which specific stalking behaviors, stalking duration and frequency, and relationship status were associated with increased psychopathology in victims. Study participants were 241 victims ages 19 to 82 who had been stalked more than a month

through more than one intrusive behavior; 89% were female and 11% were male, and 11% were local or national celebrities. The majority of victims (68%) had prior intimate relationships with their stalkers, 26% were prior acquaintances, and 6% were strangers. Eighty-eight percent of the victims were stalked by a male stalker. Results from this sample indicated that a large number of stalking victims had psychiatric symptoms (e.g., anxiety, severe depression, social dysfunction, somatic symptoms); 78% met the criteria for a diagnosable psychiatric disorder. Furthermore, 31% of participants reported having repeated suicidal ideation and several had a history of attempted suicide and inpatient psychiatric admissions. Higher symptom levels were reported when stalking behaviors included following or theft/destruction of property. Symptoms of psychopathology also increased in relation to the number of stalking behaviors (> 6), no decrease in the frequency of stalking, daily stalking behaviors, short duration of stalking, and the number of coping responses (> 6). Symptoms levels were *not* associated with the type of stalker-victim relationship, the occurrence of physical assault, the number of violent or intrusive behaviors, or the discontinuation of stalking behaviors. Regression analysis showed that 9% of the high psychopathology symptom levels were explained by only two of the variables: a decrease in the frequency of stalking and the number of interventions undertaken by victims. The authors concluded that the large amount of unexplained variance may indicate the importance of individual factors in vulnerability/resilience to stalking.

Brewster (1999, 2002) explored whether trauma symptoms varied as a result of (a) the presence of violence during a prior intimate relationship, (b) the presence of violence during the stalking, and (c) the presence of threats of violence during the

stalking period. Participants were 187 women who had been stalked within the previous five years by male spouses (37%), cohabitants (25%), serious dating partners (24%), or casual dating partners (15%). The age range of the sample was 18 to 74 years and the majority of the women were non-Hispanic White. All stalkers were male. The most common traumatic symptoms reported by participants were sadness, insomnia, restless sleep, tension, and flashbacks. Sleep disturbance symptoms were the most common and they did not vary as a result of violence or threats prior to or during the stalking. By contrast, symptoms of dissociation, anxiety, depression and post-sexual abuse trauma were more frequent for women who were subjected to explicit threats and/or violence. Once violence before and during the stalking was controlled for, however, both the presence of threat and the level of threat (explicit or implicit) no longer had any effect on symptomology, with the exception of anxiety. Women who had experienced pre-stalking violence and those who had experienced violence during the stalking had the highest rates for every symptom except sleep disturbance.

A study by Basile, Arias, Desai, and Thompson (2004), using data from the NVAW Survey (Tjaden & Thoennes, 2000; detailed in above section), investigated PTSD symptomology in 380 women who reported violence (i.e., physical, sexual, psychological, or stalking) by a current spouse or partner (including same or opposite sex, and including spouses/partners living together or not living together). The majority of the participants were White/European American, married, employed, and at least high-school educated; the average age of the women was 40 years. The authors reported that stalking was related to and co-occurred with physical, sexual, and psychological violence. Seven percent of the participants reported at least one type of stalking violence, although

the researchers indicated caution regarding this result given the low percentage for stalking compared to the other forms of violence. However, stalking, like all four forms of violence, was related to PTSD symptomology after controlling for age, education, employment and marital status, and race and ethnicity.

Mechanic, Uhlmansiek, Weaver, and Resick (2000, 2002) explored rates of PTSD in relation to acutely battered women's experiences of intimate-partner stalking. Participants in the study had been in their relationships for a minimum of three months (the average was 7 years), with the most recent episodes of violence having occurred within the past six months; the women also had experienced at least four incidents of minor and/or severe violence within the past year. The majority of the sample was African American (69%; 31% White) and financially disadvantaged; ages ranged from 19-59. Two groups were created from a sample of 114 women to capture the bottom and top thirds of the distribution: an infrequently stalked group ($n = 31$) and a relentlessly stalked group ($n = 35$). The relentlessly stalked victims reported a minimum of six different stalking events occurring once or more per week. Results of this study indicated that PTSD symptoms were more severe for relentlessly stalked women than for infrequently stalked women. Among the infrequently stalked participants, psychological abuse (emotional and verbal) were more strongly associated with increased PTSD symptoms. No differences were found between relentlessly stalked and infrequently stalked battered women on the basis of race, age, or income.

Finally, a recently published study that aimed to assess whether there are substantial differences between cyberstalking and offline stalking victimization (Sheridan & Grant, 2007) investigated emotional/medical effects of stalking on four groups of

stalking victims (using ordinal regression). Participants were drawn from a larger sample of 1,051 self-defined stalking victims recruited through anti-stalking websites in North America, the United Kingdom, and Australia and general news media in the United Kingdom. Of the larger sample, 40.2% had received unsolicited e-mails, 6.2% had first contact with their stalkers online, and 7.2% were judged to have been cyberstalked (i.e., the stalking originated online and remained online for a minimum of four weeks); 73.7% of the cyberstalked victims originally had met their stalkers online. The four groups of stalking victims were categorized according to the degree of cyber-involvement in their victimization: (a) purely online ($n = 42$; 4% of total sample), (b) cross-over (i.e., experienced purely online stalking for at least four weeks before experiencing offline stalking from the same perpetrator; $n = 51$, 4.9%), (c) proximal with online (i.e., experienced principally offline stalking but received emails or were harassed online as part of their victimization; $n = 401$, 38.6%), and (d) purely offline (i.e., not harassed via the Internet at any time; $n = 545$, 53.5%). Victimization had ended for all respondents in the four groups. All groups were largely female (range: 81-92%) and Caucasian (range: 90-98%). Results of the Sheridan and Grant (2007) investigation showed no significant differences among the four groups on an author-generated list of psychological/medical symptoms (e.g., fear, anxiety, suicidal thoughts, depression, panic attacks, sleep disturbances, self-harm, purging, visited a health professional), indicating that degree of cyber-involvement in the stalking was unrelated to psychological symptoms in this community sample. One difference found among the groups was that online stalking victimization was more likely to result in the loss of contact with family and friends. Another was that threats were reported more in purely offline (the majority) and cross-

over stalking cases. Finally, victims of only cyberstalking were more often stalked by acquaintances or strangers and less often stalked by ex-partners, though ex-partners were equally distributed across all other groups of cyberstalking involvement.

Mixed community/college student sample. In a study more sophisticated than their first (Kamphuis & Emmelkamp, 2001), Kamphuis, Emmelkamp and Bartak (2003) aimed to investigate victims' emotional and cognitive responses to post-intimate stalking and to explore associations between posttraumatic stress (PTS) symptoms and characteristics of the stalking history. Participants were 131 female intimate stalking victims from a national anti-stalking foundation, 119 female undergraduate students who had experienced violence and/or sexual violence in the past, and 42 female undergraduate students who had not experienced violence or sexual violence. The researchers reported that affective reactions to stalking included affective lability, fear, shame, and loss. Associated maladaptive beliefs included decreased trust, increased alienation and isolation, and self-blame. These affective and cognitive reactions were higher for the intimate stalking victims than for either of the undergraduate groups. A large number of participants (87%) met established criteria for posttraumatic stress. All stalking severity indices (duration, range of non-violent harassment behaviors, and presence of violence) were significantly related to subsequent posttraumatic stress, accounting for 22% of symptoms; repeated exposure to violence was most predictive of symptoms.

College student samples. Only four known research studies address the psychological impact of stalking on college students exclusively. The Sexual Victimization of College Women survey (Fisher et al., 1999, 2000; discussed previously) was an extensive national survey that included one question on psychological

functioning. Fisher et al., (1999, 2000) reported psychological injury to be the most common injury indicated by stalking victims. Almost 30% of the women surveyed were “injured emotionally or psychologically” as a result of stalking (Fisher et al., 2000), and 95.1% of stalking incidents were reported to have resulted in emotional and psychological harm to victims (Fisher et al., 1999). The other three studies, which explored psychological symptomology as a major variable in their projects, are summarized below. The first of the three used a measure of posttraumatic symptoms similar to the majority of the research investigations conducted in community stalking victim samples (detailed above), while the remaining two employed a measure of psychological symptomology that was designed for the Obsessional Relational Intrusion studies (ORI; Spitzberg & Cupach, 1996; Cupach & Spitzberg, 1997).

Westrup et al. (1999; study described in more detail above) explored differences in symptomology among stalking, harassed, and control groups. Stalking victims reported significantly more PTSD symptoms and a higher degree of stalking severity compared to the harassed or control group victims. In addition, they had significantly higher levels of psychiatric/medical symptomology.

In one of their first studies using the ORI construct, Spitzberg et al. (1998; sample described above) aimed to explore the relationships among ORI victimization, symptomology, and coping strategies. Results of the study showed a moderate relationship between stalking victimization and symptomology. Participants who self-identified as stalking victims, compared to those who did not, reported more angst, fear, and hopelessness. Specific types of ORI behaviors were associated with particular psychological symptoms. ORI aggression was significantly related to angst and fear, and

ORI pursuit victimization was related to angst and stress symptoms. No significant sex differences for either ORI victimization or symptomology were found.

In a second study applying the ORI construct, Spitzberg and Rhea (1999), explored the extent to which victimization by obsessive relational intrusion was related to sexual coercion victimization by the same perpetrator. The authors also investigated the interrelationships between victimization experiences and symptomology (the author-constructed symptoms list included both negative and resilient “symptoms,” or, victim responses). The majority of the 363 male and female students in the sample were White/European American. Unwanted pursuers were reported to be ex-partners (34%), friends (38.4%), and acquaintances (24.6%); 54% of the pursuers were male and 46% were female. The intrusive situations described occurred an average of 15 months prior to the survey and had lasted 4.75 months on average. Results of this survey showed that obsessive relational intrusion and sexual coercion victimization accounted for approximately equivalent amounts of variance in general symptoms, including distress, sense of loss, and resilience. Obsessive relational intrusion accounted for 37% of symptoms and sexual coercion predicted (38%) of symptoms. Specific analyses indicated that ORI intrusion variables predicted 15% of the variance in sense of loss symptoms, and that intrusion victimization and sexual coercion victimization variables accounted for equivalent relative proportions of resilience symptoms (i.e., 15% if entered first in a regression, and an additional 5% if entered second). The authors also reported significant sex differences for several variables, with females reporting more ORI threat, more forceful sexual coercion, psychological sexual coercion, more general symptoms, and resilience symptoms.

Summary: Psychological Impact of Offline Stalking

The literature on the psychological effects of stalking victimization is still in its infancy. Researchers have just begun, in the past few years, to assess the effects of offline stalking using psychological variables and assessments. The existing empirical literature has shown that the experience of being stalked is correlated with high levels of a range of psychological symptoms. Symptoms include anxiety, depression, suicidality, sleep disturbance, appetite disturbance, nightmares, flashbacks, dissociation, and social dysfunction. A number of studies have found symptom levels consistent with criteria for DSM-IV (American Psychiatric Association, 1994) mental disorders, particularly PTSD. Affective reactions include fear, shame, and loss. Stalking victimization also has been associated with maladaptive beliefs such as decreased trust and attributions of self-blame.

In addition, researchers have begun to explore in more detail how particular features of stalking may be related to psychological symptomology. Increases in the traumatic effects of stalking have been linked with specific types of behaviors (e.g., pursuit, surveillance), the use of a greater range of behaviors, the presence of threats of violence and actual physical violence to one's person or property, and increased duration and frequency of the stalking behaviors. Exposure to violence, in particular, has been demonstrated repeatedly to be associated with increased psychological symptoms. Limited and seemingly contradictory data exist on the relationship between psychological symptoms and decreases in stalking behaviors; one study found decreased symptomology to be associated with decreased frequency of behaviors, while another found no association between symptom levels and discontinuation of the stalking behaviors.

Some curious findings also exist with regard to the relationship status-symptomology link. Those studies using samples of victims who report different types of perpetrators suggest that the majority of stalkers are intimate partners (mostly males stalking female partners, although it should be noted that no data were reported for same-sex intimate partner relationships). However, the literature has yielded contradictory findings regarding whether the type of prior relationship with one's stalker affects psychological symptomology. Of the research studies focused on intimate partner stalking victims, one investigated and found evidence for the psychological impact of stalking over and above the relationship violence.

Strengths/limitations of the literature. Clearly, some progress has been made in these first studies exploring the psychological effects of offline stalking, but a number of limitations need to be addressed as this research literature continues to develop. The non-experimental nature of these investigations precludes definitive statistical conclusions about causal relationships between stalking victimization and psychological symptomology. However, a few of these investigations that compared stalking victims with other naturally-occurring "control" groups provide additional credibility to the initial exploratory projects conducted with only one participant group. A second limitation of this literature is a lack of standardization of the definition of stalking and a lack of established measures used to assess stalking victimization. A third limitation of the literature (in relation to the present study's focus on a university population) was that a number of the studies employed community victim services samples, which may have biased the picture of the impact of stalking toward more serious outcomes. However, even in university student samples, symptoms were substantial, particularly for victims of

stalking. Fourth, a number of the studies limited their samples to female—and, given the design of the survey questions, to heterosexual female—participants; this potentially makes invisible same-sex stalking victimization that is occurring among intimate partners, acquaintances, or strangers. Finally, although the research investigations in the area of psychological impact of stalking included international samples, a clear strength of the literature, the studies overall failed to include demographics for race/ethnicity and socioeconomic status. Without more consistent reporting of these data, external validity of these research findings is limited to the (primarily White/European/European American) populations investigated.

Academic/Career Functioning and Financial Impact

Very limited data exist regarding the impact of offline stalking or cyberstalking on academic or career functioning, or on financial status. Three studies mentioned earlier (Pathé & Mullen, 1997; Sheridan & Grant, 2007; Tjaden & Thoennes, 1998) briefly address the issue of work disruptions as part of their larger investigations of stalking. Tjaden & Thoennes (1998), in the NVAW Survey, for example, reported that 26% of stalking victims said their victimization caused them to miss time from work. Seven percent of the victims never returned to work. On average, those who returned to work missed 11 days. Pathé and Mullen (1997) indicated that half of their sample of 100 victims reported a decrease or a cessation of work or school attendance due to incessant telephone calls or other disruptions at the victim's workplace, or to absenteeism related to court attendances or medical appointments. Over a third of victims altered their workplace, school, or career as a direct result of the stalking, and approximately 40% relocated their residence one or more times. Sheridan and Grant (2007; described in detail

above), in their study comparing degrees of cyber-involvement in stalking, reported that greater amounts of offline stalking were associated with greater negative impact on changes in work/school routines, for example, cutting working hours and changing employment or one's course of study.

The above examples of intrusions into the work/academic lives of victims provide an indication of how connected academic/career functioning and financial impact can be. An explicit finding regarding financial impact was reported by Sheridan and Grant (2007); when cyberstalking was compared with offline stalking, victims were found to have lost more money as the degree of offline stalking increased. In addition, in the face of such limited empirical data, it is important to consider anecdotal reports from stalking prevention agencies and victim advocates, who assist stalking victims with managing the academic fall-out of their traumatic experiences and look for resources to help pay for the costs of trying to stay safe (e.g., replacing cell phone contracts, replacing computers infected with Spyware, relocation costs, etc.). Clearly, there is much to be done in terms of documenting the impact of cyberstalking (and offline stalking) on victims' academic, career, and financial lives.

Coping With Offline Stalking and Cyberstalking

In addition to exploring the nature, perceptions, and impact of cyberstalking, the current study aimed to identify the methods that victims use to cope with intrusive and threatening behaviors and to assess the relationship of those coping responses to the unwanted behaviors. Studies that have reported on coping strategies of victims are described below. The first section details findings from studies of offline stalking and the second section discusses coping responses in the context of cyberstalking. All of the

studies explore coping responses as a single aspect of larger investigations. Only one known study (Spitzberg & Hoobler, 2002) thus far has attempted to look at coping responses in relation to potential changes in cyberstalking behaviors; these findings are discussed at the end of the second section.

Coping With Offline Stalking

Types of coping responses. The NVAW Survey (Tjaden & Thoennes, 1998; described above) documented that 56% of women and 51% of men who experienced offline stalking reported taking some type of self-protective measure other than a police report or protective order. These included taking extra precautions; enlisting the help of family and friends; purchasing a gun; changing one's address; moving; avoiding the perpetrator; talking to an attorney; varying driving habits; moving to a shelter; refraining from going to work, school, or out publicly; sealing public records; and hiring a private investigator.

In the other major national survey, the Sexual Victimization of College Women (described previously), Fisher et al. (2000) found that victims had taken action in nearly 75% of stalking incidents. The most common responses were "to avoid the stalker" (43.2%) and "to confront the stalker" (16.3 %). Approximately 17% of stalking incidents were reported to the police, compared to 90% of incidents in which victims confided in a friend, family member, or roommate.

Fremouw et al. (1997; sample described above) surveyed both male and female undergraduate students and found a gender difference in preferred coping responses after being stalked. Strategies most often used by female students were (in rank order): ignore the stalker, confront the stalker, and change schedule to avoid stalker; male student

strategies (in rank order) were: confront the stalker, ignore the stalker, and reconcile with the stalker (presuming a prior relationship). Consistent with the findings of the two national surveys above, reporting to the police was not a frequently used option for either female or male students.

Mechanic et al. (2002; described above) reported a relationship between coping responses and victimization. Overall, relentlessly stalked battered women engaged in a greater number of help-seeking behaviors than infrequently stalked battered women. For example, relentlessly stalked women were more likely to obtain protective orders and to seek medical attention. This relationship has been confirmed across a number of studies, according to Mechanic (2002), who observed that exposure to a greater number, type, and frequency of stalking behaviors is related to increases in coping and help-seeking responses.

Spitzberg et al. (1998; detailed above), tested for the relationships among ORI victimization, symptomology, and coping strategies. The researchers confirmed their hypothesis that coping mediates the impact of victimization on symptoms. The amount and type of victimization did not contribute significantly to symptoms once coping was introduced. Number of coping responses and symptom levels were positively related.

Coping as a person-related variable. In contrast to some of the earliest work on coping responses in the face of stalking, in which coping was seen primarily as a count variable, the study by Kamphuis et al. (2003; sample described above) investigated coping styles and personality traits in relation to posttraumatic stress following post-intimate stalking. The authors reported an association between passive coping behavior and high posttraumatic stress; they concluded that individuals whose coping responses

were characterized by withdrawal, avoidance, and/or rumination might be at high risk for posttraumatic stress, whereas victims using a more proactive, problem-focused approach might increase their feelings of control in the world and reduce the risk of posttraumatic symptoms. In addition, they found that the personality trait (lower) openness to experience also was significantly related to posttraumatic stress, indicating most support for the causal direction of prolonged intrusion and harassment leading to a more constricted view of oneself and the world. Their support of this explanation came from results showing a negative correlation between openness to experience and duration of stalking, which suggested that prolonged stalking may lead to personality change in this personality domain. In addition, the researchers noted fundamental schema changes in stalking victims consistent with more vigilant, constricted personalities. Finally, the authors cited victims' reports of personality changes characterized by decreases in trust and increases in vigilance and caution. Passive coping and openness to experience contributed to 8% of the variance in posttraumatic stress.

Coping With Cyberstalking

Three known research investigations address victims' coping responses in the face of cyberstalking; in the first of these, Finn (2004) explored students' reporting behaviors as part of his study of online harassment (sample described above). This investigation found that only 6.4% of the 339 students surveyed reported online harassment to an authority, 70.7% did not report the harassment, and 22.5% did not respond to the question. No demographic or computer usage differences were found among those students who did and did not report the harassment; however, students who reported online harassment were more likely to experience e-mail harassment and I-M harassment

and to receive unwanted pornography. Students reported the harassment mainly to their Internet providers (30.4%), but also to residence hall advisors, the Computer Information Services help desk, the campus police, and other campus offices. Of the students who had reported the harassment, 47.8% indicated that the situation had not been resolved to their satisfaction. Reasons listed by those students who did not report the harassment included (a) “The problem was not serious enough” (37.5%), (b) “I ignored it” (19.5%), (c) “I handled it myself” (19.5%), and (d) “I did not know to whom to report it” (12.5%). Finally, most students (91%) were aware that their personal information (e.g., address, phone number, and e-mail address) was available online through the university system, but less than half of those students (41.6%) were aware that they could request to have their personal information removed from the system.

Alexy et al.’s (2005) study (described above) asked about the coping strategies used by university cyberstalking and offline stalking victims. These included yelling at the person; screening phone calls; and trying to reason with, threaten, or plead with the stalker. Eleven percent of victims chose not to tell anyone, whereas 75% told close friends and 54% told a family member. Students who were cyberstalked were more likely not to do something because they thought that the situation would stop.

Finally, in their comparisons of groups with different degrees of cyber-involvement in stalking, Sheridan and Grant (2007) indicated that victims in their purely cyberstalked category were more likely to report that police took them seriously; the authors suggested that this may have been related to an additional finding of the study that purely cyberstalked victims most often said that they had kept evidence of their victimization.

Relationships between coping responses and cyberstalking behaviors. Very little information exists on the relationship between coping responses and cyberstalking (or offline stalking) behaviors. According to Spitzberg and Cupach (2001), a few studies have addressed the success rates of restraining orders in stalking cases (about 50% success in preventing subsequent contact of the victims by the stalker). In light of the dearth of research on this topic, Spitzberg and Cupach (2001) developed a taxonomy of coping responses based on an exhaustive review of the general coping literature. The taxonomy categorizes coping responses into extra-relational and relational responses. Extra-relational responses include the subcategories of Moving Inward (engaging in activities that manage one's view of self, one's own worldview, or the escape into one's self and one's own experiences) and Moving Outward (engaging the assistance, input, feedback, and/or support of third parties). Relational responses include the subcategories of Moving Away (engaging in activities to avoid interaction with the pursuer), Moving Toward/With (engaging in activities to maintain the relationship in a preferred relational form), and Moving Against (engaging in activities to end the relationship, or harm, punish, or retaliate against the pursuer). Spitzberg and Brundidge (2001) developed a coping measure derived from this taxonomy, and Spitzberg and Hoobler (2002) piloted the measure, finding that interactional forms of coping (i.e., Moving Toward/With and Moving Against) were related consistently with cyberstalking. Cupach & Spitzberg (1998) and many other stalking experts (e.g., de Becker, 1997) have suggested that victims may unknowingly engage the cyber-stalkers by their responses (i.e., any response is a response, and intermittently reinforced behaviors are the most reinforcing). Spitzberg and Hoobler also found that more severe and deviant forms of cyber-pursuit showed little

or no relationship to coping responses. The authors suggested that cyberstalking victims may become immobilized and discontinue coping responses, perhaps because more extreme cyberstalkers are able to circumvent most typical coping responses. They indicated the need for further research investigations to explore which coping responses, if any, provide specific deterrence or protection from, and which may perpetuate or facilitate, given forms of cyberstalking. The present study addressed this suggestion.

Summary: Coping with Offline Stalking and Cyberstalking

The research literature on stalking only recently has begun to address the role of coping responses in relation to victimization. Both offline and online stalking studies suggest that victimization is not often reported to an authority. More than half of student victims (both men and women), for example, attempted to employ self-protective measures before considering reaching out for help; this is because they did not believe the problem was serious, felt they could handle the issue themselves, or lacked information about how to report the situation. In some studies, women and men were reported to have favored different initial coping strategies. Of those individuals who did report the online stalking through the judicial system or some authority, approximately half were not satisfied with the response they received.

Initial work has begun in studying the coping behaviors of stalking victims in the context of personality features. Passive coping styles as well as less open and more rigid, cautious, cognitive schemas have been found to be related to increases in posttraumatic symptoms. Researchers thus have suggested the need for additional study of the potentially protective benefits of more active coping styles and more resilient cognitive schemas in the face of stalking victimization.

Very little information exists on the relationship between coping responses and cyberstalking behaviors aside from reports regarding success rates for protective orders, approximately 50% (Spitzberg & Hoobler, 2002). Studies that have addressed this relationship suggest that, in many cases, victims may unwittingly engage the cyberstalkers by their responses. In addition, coping responses may simply reflect (rather than reduce) symptomology associated with victimization. Researchers thus have called for further investigations to explore which coping responses, if any, provide specific deterrence or protection from, and which may perpetuate or facilitate, given forms of cyberstalking. Particular to cyberstalking on college campuses, there is a need to tap the tremendous protective potential of technology while being aware of the factors that may spell risk for students participating in cyberspace.

Additionally, almost nothing is known about a specific type of coping response: reporting behaviors. Information about whether students report (either informally or formally) their cyberstalking victimization, which person-related or situational factors may promote or hinder reporting, and how successful those reports are once they are made will provide important instruction for university students' social support networks and legal, judicial, clinical, educational, and Internet service providers on- and off-campus.

Overall Summary of the Literature and Statement of the Problem

Empirical research is greatly needed to explore the nature of cyberstalking on university campuses. As documented by the existing literature, offline stalking is a substantial problem in this population. University students' demographic and lifestyle characteristics, combined with their exponentially increasing use of technology and its

attending risks, suggest that cyberstalking also is of serious concern. A few studies have begun to document the nature and perceptions of cyberstalking among college students, but overall these have lacked a consistent definitional framework and a standardized assessment tool for measuring cyberstalking victimization. This study, employing a modification of the cyber-obsessional pursuit construct and measure (Spitzberg & Hoobler, 2002) and an author-generated measure of perceived threat based on legal definitions of stalking and harassment, addressed these limitations by further clarifying the constructs and assessment measures for cyberstalking victimization. The resulting constructs/measures allow for comparisons with legal definitions of stalking; this is critical so that research findings regarding cyberstalking can be translated into legal policy and improved victim advocacy.

The *first major purpose of the current study* was to investigate the impact of cyberstalking victimization on university students, including impact on psychological health (i.e., trauma-related symptoms) and academic/career functioning. Financial impact also was explored briefly. The empirical literature for offline stalking, though young, clearly has demonstrated that victimization is associated with serious psychological problems (e.g., anxiety, depression, suicidality, social dysfunction, etc.); there is some evidence that victimization also results in disruptions to one's work life and, by extension, financial well-being. As of the present day, only one empirical study has explored psychological symptoms or academic/career functioning in relation to cyberstalking; the researchers found no relationship between cyberstalking victimization alone and psychological symptoms; relationships were found between victimization and both academic/career outcomes and financial status. Given that offline stalking and

cyberstalking have been shown to be related (e.g., in studies of obsessive relational pursuit; Spitzberg et al., 1998) and that there are empirically-established links between offline victimization and symptomology, it seemed important to examine in greater depth whether and to what extent cyberstalking victimization contributes to the poorer psychological, academic/career, and financial health of students on university campuses.

More specifically, in light of research from the offline stalking literature that has begun to identify the relative contributions of particular features of stalking to symptomology, the current study investigated demographic and situational variables for cyberstalking victimization that may predict severity of impact. These were: the ongoing nature of the cyberstalking; self-defined victimization; the frequency, duration, and intensity of the cyberstalking; the number of intrusive behaviors; the prior relationship with the stalker; the victim's sex/sexual orientation; the pursuer's sex; and the academic status of the victim.

The construct "perception of threat," while folded into some definitions of stalking in existing surveys on stalking victimization, has not been investigated as a separate variable in any of investigations regarding actual (versus scenarios of) stalking victimization. Therefore, the study also explored the possibility that threat perception mediates the relationship between victimization and impact, that is, without perceiving the experience of unwanted pursuit behaviors as threatening or emotionally distressing to some degree, there will be no significant impact on victims (i.e., in terms of psychological symptoms and academic/career functioning).

The *second major purpose of the study* was to investigate university students' coping responses, coping resilience, and reporting behaviors in the face of cyberstalking

victimization. The literature on coping responses and stalking victimization is in its infancy. There is very limited knowledge regarding what students do in response to cyberstalking or offline stalking behaviors. It appears that most students try to employ self-protective measures before seeking help; most will not ever report the behaviors to an authority. Research is needed to obtain basic information regarding which coping responses are used most often by students who encounter cyberstalking, and which coping strategies, if any, provide deterrence or protection from, or perpetuate or facilitate, cyberstalking victimization.

In addition to increasing knowledge about types and effectiveness of specific coping responses, the present study aimed to further the work of stalking victimization researchers who have begun to explore coping as a personality variable that may contribute to increased symptomology or, by corollary, may provide protection against the negative psychological outcomes of stalking victimization. With regard to the latter hypothesis, some researchers have suggested that victims using a more proactive, problem-focused approach might increase their feelings of control in the world and reduce their risk for posttraumatic symptoms. In response to this suggestion, the current study investigated the construct of resilient coping as a potential moderator in the relationships between cyberstalking victimization and the main outcome variables in the study: psychological trauma and impaired academic/career functioning.

Finally, the study addressed calls from researchers and victim services organizations to learn more about university students' reporting behaviors in the face of cyberstalking victimization. Little is known about which variables predict informal and formal reporting, or about students' use of and satisfaction with those campus and off-

campus resources available to cyberstalking victims. This important additional information about students' reporting behaviors and their perceptions regarding the usefulness of campus services will benefit future interventions designed to prevent and address cyberstalking victimization experienced by the university population.

Consistent with the existing research literature regarding cyberstalking victimization and the stated purposes of the proposed study, the specific research questions to be explored included the following:

Research Question 1: Does cyberstalking victimization predict psychological trauma?

1a. Which cyberstalking victimization person and context variables (i.e., self-defined cyberstalking victimization, duration, frequency, intensity, count of cyberstalking behaviors experienced, prior relationship with stalker, victim sex/sexual orientation, pursuer sex, academic status) uniquely predict trauma-related symptoms above and beyond the other variables, after controlling for cyberstalking outcome (i.e., whether the cyberstalking has stopped or is ongoing/unknown)?

Research Question 2: Does resilient coping moderate the relationship between cyberstalking victimization and psychological trauma?

Research Question 3: Does cyberstalking victimization predict impaired academic/career functioning?

3a. Which cyberstalking victimization person and context variables (i.e., self-defined cyberstalking victimization, duration, frequency, intensity, count of cyberstalking behaviors experienced, prior relationship with stalker, victim sex/sexual orientation, pursuer sex, academic status) distinguish victims reporting

impaired academic/career functioning from victims who report no impairment of functioning, after controlling for cyberstalking outcome (i.e., whether the cyberstalking has stopped or is ongoing/unknown)?

Research Question 4: Does resilient coping moderate the relationship between cyberstalking victimization and academic/career functioning?

Research Question 5: Does threat perception mediate the relationship between (a) cyberstalking victimization and psychological trauma, (b) cyberstalking victimization and impaired academic/career functioning, and (c) cyberstalking victimization and formal reporting?

Research Question 6: Which coping responses are exhibited by students who experience cyberstalking behaviors and are there relationships between coping response effectiveness and specific variables in the study?

6a: Which coping responses are most often used by students who experience cyberstalking behaviors and how effective are these responses in reducing or stopping the unwanted pursuit behaviors?

6b: Is effectiveness of coping responses exhibited by students who experience cyberstalking behaviors related to characteristics of the victim (e.g., sex), type of prior victim-persuer relationship, or self-defined cyberstalking victimization?

Research Question 7: What are the reporting behaviors of university cyberstalking victims, which variables predict reporting of victimization, what disciplinary outcomes are reported by victims, and how satisfied are students with their reporting experiences?

7a: To whom and with what frequency do cyberstalking victims report?

7b. Which cyberstalking victimization person and context variables (i.e., self-defined cyberstalking victimization, duration, frequency, intensity, count of cyberstalking behaviors experienced, prior relationship with stalker, victim's sex/sexual orientation, pursuer's sex, victim's academic status) uniquely predict informal and/or formal reporting behaviors, above and beyond the other variables?

7c. What disciplinary outcomes are reported by cyberstalking victims?

7d. How satisfied are student cyberstalking victims with their reporting experiences?

CHAPTER 3: METHOD

Design

The present study used a correlational design to examine the relationship at one point in time between nine predictor variables (self-defined cyberstalking victimization, duration, frequency, intensity, count of cyberstalking behaviors experienced, prior relationship with pursuer, victim's sex/sexual orientation, pursuer's sex, and victim's academic status) and two outcome variables (psychological trauma and academic/career functioning), controlling for whether the cyberstalking victimization had stopped or was ongoing/unknown. Hierarchical multiple linear regression and hierarchical binary logistic regression were used for the analyses. Neither a MANOVA nor canonical correlation design, in which both outcome variables could be considered simultaneously, was considered in this case given that one of the outcome variables was continuous (psychological trauma) and one was categorical (academic/career functioning). The potential moderating relationship of resilient coping on the association between cyberstalking victimization and the outcome variables was explored within the two regressions. In addition, multiple regression analyses were used to investigate the potential mediating relationship of perceived threat on the association between cyberstalking victimization and three separate outcome variables: psychological trauma, impairment of academic/career functioning, and formal reporting of the cyberstalking. The study also explored relationships between victims' coping responses and three separate variables of interest: victim's sex, self-defined cyberstalking victimization, and prior relationship with pursuer; chi-square analyses were used for these investigations. Finally, binary logistic regression was applied to examine the relationship at one point in

time between the nine cyberstalking victimization predictor variables and reporting behaviors (informal and formal) of victims.

Participants

Participants were 452 currently-enrolled college/university undergraduate and graduate students (including medical, law, and Master's and doctoral-level graduate students) in the United States. Post-hoc power analyses were conducted for the statistical tests with the greatest complexity and greatest number of variables to confirm that conditions for appropriate power were met. A power analysis (G*Power, Erdfelder, Faul, & Buchner, 1996; Cohen & Cohen, 1983) demonstrated that, for each of the main regression analyses, 402 subjects were necessary in order to have a .95 probability of rejecting the null hypothesis ($p < .05$) for a small-to-medium effect size ($f^2 = .06$). The power analysis for the chi-square analyses with the most category items indicated a power ($1 - \beta$ error probability) of 0.9997. Thus, the conditions for appropriate power were met. Participants were recruited via e-mail using snowball/convenience sampling. (More detailed information regarding recruitment and return rates is provided in the Procedures section of this chapter.) All participants were directed to a secure internet site where they filled out a questionnaire containing the measures for the present study.

Participants in the study were those students who, after filling out a 17-item cyberstalking victimization screening questionnaire, identified as (a) having experienced cyberstalking or (b) having experienced cyberstalking behaviors without feeling threatened or afraid. Table 1 describes the sample on characteristics of age; race/ethnicity; sex; sexual orientation; current relationship status; academic year/status; university type, size, and location; and how the participant learned about the survey.

Table 1

Demographic Characteristics of Participants (N = 452)

Characteristic	<i>n</i>	%
Age		
18-22	318	70.4
23-27	76	16.8
28-32	30	6.6
33-37	4	0.9
38-43	3	0.7
Race/Ethnicity		
African American/Caribbean/Black	34	7.5
Asian American/Pacific Islander	26	5.8
South Asian/Indian/Pakistani	9	2.0
European-American/White	323	71.5
Middle-Eastern/Arab	6	1.3
Native American/Native Alaskan	3	0.7
Biracial/Multiracial/Other	48	10.6
Not Reported	3	0.7
Sex		
Female	367	81.2
Male	81	17.9
Other	4	0.9

Table 1 (continued)

Characteristic	<i>n</i>	%
Sexual Orientation		
Heterosexual	373	82.5
Gay/Lesbian	35	7.7
Bisexual	31	6.9
Other	11	2.4
Not reported	2	0.4
Current Relationship Status		
Not dating	92	20.4
Occasionally dating	114	25.2
Dating exclusively	186	41.2
Married/committed partner	55	12.2
Separated/divorced	4	0.9
Not reported	1	0.2
Academic Year/Status		
First-year undergraduate	47	10.4
Sophomore	69	15.3
Junior	93	20.6
Senior	125	27.7
Fifth-year or beyond undergraduate	27	6.0
Graduate student	91	20.1
Type of College/University Attended		
Private	115	25.4
Public/State	337	74.6

Table 1 (continued)

Characteristic	<i>n</i>	%
Type of College/University Attended		
2-year undergraduate/community college	3	0.7
4-year primarily undergraduate	89	19.7
4-year undergraduate & graduate	360	79.6
Size of College/University Attended		
Small (< 5,000)	87	19.2
Medium (5-10,000)	80	17.7
Large (> 10,000)	285	63.1
U.S. College/University Location		
New England	65	14.4
Mid-Atlantic	180	39.8
Southeast	46	10.2
Midwest	120	26.5
Northwest	21	4.6
Southwest	20	4.4
How Learned About Survey		
Another college/university student	50	11.1
Staff/faculty member	210	46.8
Online listserv	147	32.7
Online community (e.g., Facebook, MySpace)	13	2.9
Online experiment for credit	14	3.1
Other	15	3.3

The mean age of the sample was 21.9, with the range varying from 18 to 43 years old. The sex/gender of the sample was 81.2 % female, 17.9 % male, and 0.9 % other. The racial/ethnic background of the sample was largely European-American/White (71.5%); other racial/ethnic groups represented were African American/Caribbean/Black (7.5 %), Asian American/Pacific Islander (5.8 %), South Asian/Indian/Pakistani (2.0 %), Middle-Eastern/Arab (1.3 %), Native American/Native Alaskan (0.7 %), and Biracial/Multiracial/Other (10.6 %). The Biracial/Multiracial/Other category included 19 students who recorded their racial/ethnic identities as Hispanic or Latino/a (4.2 % of the total sample; note that, because this racial/ethnic identity was mistakenly omitted in the list of categories on the online survey, this percentage may not accurately represent this group's representation in the sample, i.e., there may have been additional students identifying as Hispanic or Latino/a who checked "Other" but did not write in their racial/ethnic identities. The Biracial/Multiracial/Other category also included all participants who checked more than one race/ethnicity. Three students (0.7 %) did not report their racial/ethnic background. The majority of the participants identified as heterosexual (82.5 %), with 7.7 % identifying as gay/lesbian, 6.9 % identifying as bisexual, and 2.4 % identifying as other; two students (0.4%) did not report their sexual orientations. The relationship status of the sample was varied: not dating (20.4 %), occasionally dating (25.2 %), dating exclusively (41.2 %), married/committed partner (12.2 %), and separated/divorced (0.9 %). One student (0.2%) did not report relationship status.

Within the sample, a cross-section of academic year/status was represented: first-year undergraduate (10.4 %), sophomore (15.3 %), junior (20.6 %), senior (27.7 %),

fifth-year or beyond undergraduate (6.0 %), and graduate student (including Master's, doctoral, law, or medical degrees; 20.1 %). With regard to type of college/university attended, 25.4 % students were enrolled in private institutions while 74.6 % were enrolled in public/state institutions; the majority of the sample attended four-year undergraduate/graduate institutions (79.6 %), with a minority attending four-year primarily undergraduate institutions (19.7 %) or two-year undergraduate colleges/community colleges (0.7%). The size of college/university attended varied: 19.2 % attended small schools (up to 5,000 students), 17.7 % attended medium schools (5,000-10,000 students), and 63.1 % were enrolled in large colleges/universities (over 10,000 students). The sample included students from throughout the United States, with 14.4 % from New England, 39.8 % from the Mid-Atlantic region, 10.2 % from the Southeast, 26.5 % from the Midwest, 4.6 % from the Northwest, and 4.4 % from the Southwest. Students ($N = 449$) learned about the survey from a range of sources, including (in descending order of frequency) a staff/faculty member (46.8%), an online listserv (32.7%), another college/university student (11.1%), an online community such as Facebook or MySpace (2.9%), online experiment for credit (3.1 %), or other sources (3.3%), for example, a friend, family friend, neighbor, or volunteer.

Measures

Demographic Form

As reported above, an 11-item self-report measure was used to obtain the following demographic information from participants: age; race/ethnicity; sex/gender; sexual orientation; current relationship status; academic year/status; university type, size, and location; and how the participant learned about the survey (see Appendix A).

Cyberstalking Victimization

Cyberstalking victimization was measured using (a) a modified version of the Cyber-Pursuit Questionnaire (Spitzberg & Cupach, 2000), (b) selected modified items from the Obsessive Relational Intrusion (Victim Short Form) questionnaire (ORI; Spitzberg & Cupach, 1997), (c) the Stalking/Harassment Threat Perception Scale (TPS) created by the author of the present study, and (d) additional items generated by the author (see Appendix B for the combined 37-item instrument, renamed the Cyberstalking Victimization Questionnaire). The Cyber-Pursuit Questionnaire and the ORI (Victim Short Form) questionnaire are self-report measures of stalking/pursuit behaviors received. The Cyber-Pursuit Questionnaire (Spitzberg & Cupach, 2000) specifically targets cyberstalking behaviors, while the ORI questionnaire (Spitzberg & Cupach, 1997) was designed to investigate offline stalking victimization and includes a series of descriptive questions regarding the participant's "most persistent pursuer."

Because both of the existing measures were relatively new and had not been widely tested, only exploratory analysis data were available. Spitzberg and Hoobler (2002) piloted the Cyber-Pursuit questionnaire in three studies. In the third pilot, they reported the Kaiser-Meyer-Olkin (KMO) to be .70, indicating acceptable intercorrelation and sample size to conduct principal components analysis, from which a three-component solution emerged. The three components were labeled hyperintimacy ($\alpha = .88$), real-life transference ($\alpha = .74$), and threat ($\alpha = .77$). All three factors revealed small but statistically significant correlations with measures of online activity and exposure, and both the hyperintimacy and threat factors were significantly associated with victimization as measured by the ORI questionnaire (Spitzberg & Cupach, 1997). Spitzberg and

Hoobler (2002) reported a KMO of .89 for the 24-item ORI measure (for additional published studies using this measure, see Spitzberg et al., 1998, 2001; Spitzberg & Rhea, 1999).

Modifications to the original 44-item Cyber-Pursuit Questionnaire for the current study included (a) deleting the latter section of the questionnaire (19 items), which included items about online activity/behaviors, computer competence, and social self-perceptions; (b) changing the questionnaire introduction (the original survey asked participants to report on the behaviors of individuals who had “obsessively pursued you...over a period of time for the purpose of establishing an intimate relationship...”; the modified questionnaire eliminated the term “obsessive” and broadened the context for the unwanted behaviors); (c) replacing the Likert-type scale response options for frequency of behaviors experienced with two response options: yes and no; (d) deleting and combining individual cyber-pursuit behavior items that were repetitive or more detailed than this study required; and (e) adding three items to reflect recent judicial cases and media reports of technology-aided stalking/harassment (these included “posting or distributing pictures of you without your consent”; monitoring your online profiles, away messages, etc.”; and “tracking your whereabouts using a global positioning system [GPS] device in a cell phone, car, etc.”). The modified questionnaire had 17 items with yes/no response options for each item (see bulleted items on the first page of the Cyberstalking Victimization Questionnaire, Appendix B). The number of “yes” responses was totaled to create a count of cyberstalking behaviors experienced. Total possible scores ranged from 0-17, with higher scores indicating a greater number of cyberstalking behaviors experienced. Eleven questions in the present survey were derived from the Obsessive

Relational Intrusion (Victim Short Form) questionnaire (Spitzberg & Cupach, 1997); these included both categorical and scale variable items designed to identify the contexts for participants' most unwanted stalking victimization experiences and whether participants labeled their experiences as stalking. Examples of *context* items from the original ORI (Victim Short Form) questionnaire were "Approximately how long did it occur in years and months?" and "What type of relationship did you have, if any, prior to the time that the pursuit became unwanted?" An example of a *labeling* question was "Would you consider what you experienced as a form of 'stalking?' That is, have you ever been 'stalked'?" In the present study, items from the ORI (Victim Short Form) questionnaire were modified slightly for clarity and language consistency with other Cyberstalking Victimization Questionnaire items.

In addition to the items derived from the Cyber-Pursuit Questionnaire (Spitzberg & Cupach, 2000) and the ORI (Victim Short Form) questionnaire (Spitzberg & Cupach, 1997), twelve new items were created by this author. One qualitative item, which preceded the cyberstalking *context* items (described above) and the Stalking/Harassment Threat Perception Scale items (described below), requested that participants describe their worst cyberstalking experience; participants used this reported experience as the stimulus for answering the remainder of the survey questions. Four of the 12 new items were additional *context* items and an *outcome* item; they included the following: (a) "During what time period in your life did the cyberstalking occur?" (b) "How did this pursuer obtain your contact information/information about you?" (c) "Please specify where online you think your pursuer obtained information about you" (only asked of participants who indicated that their pursuers' sources were online), and (d) "What was

the outcome of your cyberstalking experience? That is, the behaviors: stopped, lessened, increased, are ongoing, other (please specify).” The remaining seven newly-created items were created from national-consensus legal definitions for offline stalking and harassment and comprise the Stalking/Harassment Threat Perception Scale (TPS).

Stalking/Harassment Threat Perception Scale (TPS). The instructions for the TPS (see Appendix B: bottom of second page) asked participants to think of their “worst cyberstalking experience” that they had described in the previous question and then rate the degree to which these behaviors had flattered, amused, seriously annoyed, emotionally distressed, or threatened/caused fear in them (7 items). The five negative-emotion items were derived from legal criteria for stalking and harassment victimization; the two positive-emotion items, which provided a foil for the legal-definition/negative-emotion items, were created to reflect the author’s experience with college/university students who have reacted more favorably to cyber-harassing behaviors that instill fear in other students. The seven items on the TPS were measured on a seven-point Likert-type scale, ranging from 0 (“not at all”) to 6 (“extremely”).

An exploratory factor analysis was conducted on the TPS to determine if it could be used as a measure of perceived threat. A principal components analysis method of extraction was selected to accommodate the multicollinearity among the highly-correlated items (the correlation matrix determinant was near zero [.033]). The sample size of 452 was adequate, with more than 50 respondents per item. The results of the Kaiser-Meyer-Olkin measure of sampling adequacy ($KMO = .741$) and Bartlett’s Test of Sphericity ($p < .000$) confirmed that there was acceptable sample size and intercorrelation among the variables to conduct a principal components analysis (Pett, Lackey, &

Sullivan, 2003). The analysis yielded a two-factor solution based on the Kaiser criterion of eigenvalues > 1.0 ($\lambda_1 = 3.309$, $\lambda_2 = 4.548$) and a visual examination of the scree plot.

Table 2 shows the loadings for the two factors. The first factor included the five negative-emotion items and accounted for 47% of the item variance; the second factor included the positive-emotion items and accounted for 22% of the item variance.

Table 2

Factor Analysis Results for Stalking/Harassment Threat Perception Scale (TPS)

Item	Factor	
	1	2
Seriously annoyed you	.587	-.211
Flattered you	-.403	.787
Amused you or made you curious	-.403	.800
Caused you substantial emotional distress	.836	.197
Caused you to feel afraid or threatened	.892	.220
Caused you to fear for your own safety or the safety of your friends, family, pets, or possessions	.859	.261
Included a specific threat (re: harming you or someone/something you care about)	.637	.289

Note. Items are displayed in the order that they appeared on the survey.

The two components were labeled threat ($\alpha = 0.85$) and non-threat ($\alpha = 0.79$). The *non-threat* factor included only two items and was not used further in the study. A five-item subscale, TPS-Threat, was created from the *threat* factor. The items comprising the scale were (a) “seriously annoyed you”; (b) caused you substantial emotional distress”; (c) “caused you to feel afraid or threatened”; (d) “caused you to fear for your own safety or the safety of your friends, family, pets, or possessions”; and (e) “included a specific threat (re: harming you or someone/something you care about).”

Scores (from 0 to 6) for each of the five items were summed to create the TPS-Threat subscale score, with 30 being the highest possible total score. An internal consistency estimate of reliability (Cronbach’s alpha) was computed for the TPS-Threat subscale ($\alpha = .85$); this confirmed that the reliability of the scale was well above the acceptable level of .7 for research purposes. The reliability of the subscale was retested after removing the item with the lowest loading score (“seriously annoyed you”); the increase in reliability that resulted from deleting this item was negligible ($\alpha = .87$) and therefore the 5-item subscale was retained. Analyses with the TPS-Threat subscale revealed statistically significant correlations with a standard measure of trauma, the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997; $r = .71$), and another variable measuring victimization in the Cyberstalking Victimization Questionnaire (i.e., count of cyberstalking behaviors experienced; $r = .40$).

Impact Measures

Psychological trauma. The Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997) was used to measure levels of posttraumatic symptoms in participants (see Appendix C). The original Impact of Event Scale (IES; Horowitz, Wilner, &

Alvarez, 1979) was developed before the adoption of “posttraumatic stress disorder” (PTSD) as an official diagnosis in the DSM-IV (American Psychiatric Association, 1994). The 22-item IES-R measure includes the original IES intrusion and avoidance scales and seven additional items that tap the domains of hyperarousal and dissociation to better parallel DSM-IV diagnostic criteria. The revised measure asks about the degree of distress experienced in relation to specific symptoms and uses a 0-4 response format (0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, and 4 = extremely). Examples of items include: “Any reminder brought back feelings about it” and “I was jumpy and easily startled.” Means from the three subscales are summed to provide a total impact score; possible total scores range from 0-12, with higher scores indicating more trauma-related symptomology and thus suggesting greater intrusiveness/disruptiveness of an event. In the present study, the introduction to the measure was modified to accommodate the event of interest in this study (worst cyberstalking experience) and to prompt participants to report distress experienced within the six months immediately following that experience.

The original IES is a widely-used instrument that has shown favorable psychometric properties. Horowitz et al. (1979) reported the internal consistency of the subscales to be .78 for Intrusion and .82 for Avoidance and the split-half reliability for the total score to be .86. The IES has been reported to classify correctly 84% of respondents with PTSD (Arata, Saunders, & Kilpatrick, 1991). Initial studies of the *revised* measure (IES-R; Weiss & Marmar, 1997) also indicate good psychometric properties. Internal consistency of the measure’s three subscales was found to be very high in two separate studies of natural disaster victims (e.g., intrusion = .91, avoidance =

.84, hyperarousal = .90); test-retest correlation coefficients were in acceptable ranges. A more recent study by Basile et al. (2004) investigated posttraumatic stress symptoms in victims of intimate partner violence using a slightly modified version of the IES-R and reported a standardized alpha coefficient of .95. The internal reliability alpha for the present sample was .95 ($N = 452$).

Financial impact. Financial impact was assessed using a single item (see Appendix D): “Did you suffer any financial losses as a result of your cyberstalking experience (e.g., had to purchase a new cell phone plan, computer software, etc.)?” Responses included “no” and “yes,” with a prompt for participants who checked “yes” to describe their losses in more detail.

Academic/career functioning. Impairment of academic and career functioning was measured using a 15-item, modified version of the Impact on Career and Educational Functioning (ICE) scale (Linn, 1999; adapted from Gerrity, 1994; see Appendix E). Gerrity (1994) developed the Impact on Life and Impact on Job Productivity scales to assess participants’ perceptions of the impact of negative experiences (specifically, sexual harassment) on their physical, emotional, career, and interpersonal functioning. Linn (1999) incorporated items from those scales as well as new items in developing the ICE, a 13-item measure that assesses the perceived impact of an experience on career and educational functioning. Linn reported high internal consistency reliability ($\alpha = .94$) for the instrument. Initially in the present study, one somewhat redundant item was deleted due to space considerations and five new items were added (two reverse-scored items accounted for the possibility that time spent on and quality of schoolwork might increase after experiencing a difficult life experience and three items asked about more specific

negative academic impacts: course incompletes, course withdrawals, and transfer history); the modified measure had a total of 17 items. After collecting the data, it was decided not to include the two new items about increased schoolwork time and quality due to challenges in scoring the items (the original intention to reverse-score these items did not seem to account for the possibility of overcompensating due to trauma, which could—but not necessarily—reflect a negative impact). Thus, the final measure used in the study analyses was composed of 15 items. The measure items were rated on a 5-point Likert-type scale (0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, and 4 = extremely). Responses were summed to provide a measure of impact, with scores ranging from 0 to 60. Higher scores indicated greater impact on academic/career functioning. Examples of items included the following: “I felt more depressed/apathetic about school” and “The quality of my schoolwork decreased.” The internal reliability alpha for the present sample was .93 ($N = 439$).

Coping

Brief resilient coping scale. The Brief Resilient Coping Scale (Sinclair & Wallston, 2004; see Appendix F) is a 4-item measure designed to evaluate an individual’s tendency to cope in an adaptive way. The scale uses a 5-point Likert-type scale and asks the following question: “Consider how well the following statements describe your behavior and actions on a scale from 1 to 5, where 1 means the statement does not describe you at all and 5 means it describes you very well.” In the current study, the scale was changed to be consistent with other measures in the survey; the scale range was from 0 to 4. Examples of items are “I believe that I can grow in positive ways by dealing with difficult situations” and “Regardless of what happens to me, I believe I can control my

reaction to it.” Scores on the BRCS can range from 4 to 20 with higher scores indicating more resilient coping (in the present study, the possible range was 0 to 16). Initial Chronbach’s alpha scores were 0.69 and test retest-reliability was 0.71.

Coping responses measure. Participants’ coping responses were assessed with a self-report list of 15 coping strategies (see Appendix G). The majority of the items were derived from the ORI Coping measure, a 40-item measure developed by Spitzberg and Brundidge (2001); a number of these were modified for the sake of brevity and clarity (e.g., lengthy items were shortened and combined into single items; concrete response behaviors rather than categorical descriptions were used). Four of the 15 items were generated by the author of present study. Examples of new items included “decreased my use of the Internet or specific Internet sites, decreased my cell phone use, etc.” and “met with police to do a threat assessment.” For each of the 15 coping response items, participants were asked what effect that particular strategy had on the cyberstalking pursuit behaviors they had experienced. Participants indicated one of following options in response to the prompt, “This strategy...”: (a) “I did not use,” (b) “decreased or stopped the behaviors,” (c) “increased the behaviors,” or (d) had no effect on the behaviors.

Reporting

Participants’ reporting behaviors were measured with seven items (see Appendix H). Six items generated by the author of this study included categorical, qualitative, and combined categorical/open-ended questions that identified which persons/offices students contacted about their cyberstalking experiences, how satisfied victims were with the responses they received from those persons/offices, whether victims filed formal reports regarding their cyberstalking victimization, and whether disciplinary action of any kind

resulted from those reports. One additional item, which asked participants to indicate the reason for not reporting, was drawn from the Survey of Online Harassment (Finn, 2004).

Procedure

Expert Consultations

To ensure that the present study was addressing questions of interest and of use to the victim services community, the author consulted with experts from the National Center for Victims of Crime Stalking Resource Center and the National Network to End Domestic Violence (National Safe & Strategic Technology Project), who provided feedback on both the research questions and specific survey items. Four University of Maryland faculty/staff members also were consulted for their particular expertise in Maryland harassment/stalking laws, national crime statistics survey design, sexual harassment, and technology, respectively.

Piloting of the Survey

To assure that the survey instrument was relevant to the experiences of university students and to test average completion time and the clarity of survey questions, the survey was piloted with 10 student (undergraduate and graduate) victim advocates from the University of Maryland. The pilot group reported survey completion times ranging from 11 to 22 minutes, indicated features they liked about the survey (e.g., the percent-completed bar at the top of the pages, ease of filling out the questions), and made suggestions for changes (e.g., correcting a typographical error).

Recruitment of Study Participants

Invitations to participate in the study were sent out mid-November, 2007 through early February, 2008, with repeat invitations sent to specific recipients and lists to

attempt to increase the diversity of the sample (e.g., geographical area, sexual orientation) and to account for the timing of the initial distribution toward the end of the fall academic semester. The invitations targeted students directly as well as university faculty/staff members or adults in the community who were likely to have contact with college undergraduates or graduate students who may have experienced cyberstalking. E-mails directed to faculty, staff, and community adults included a header or separate e-mail requesting that they forward the survey advertisement to students with whom they had contact (see Appendix I for examples of the invitations). The survey invitation was (a) advertised through Facebook.com (paid advertisements and wall postings on individual profile pages and group pages [i.e., groups whose titles/descriptions self-identified as interested in the issue of online stalking]); (b) announced at two victim prevention/response conferences (the National Crime Victims Center's Stalking Resource Center Campus Institute, which included staff/faculty participants from 14 campuses nationally who have stalking education/prevention grants, and a regional mid-Atlantic campus sexual/relationship violence prevention conference); (c) posted on national victim response websites; (d) e-mailed to targeted national listservs and e-distribution lists (e.g., campus violence prevention educators/victim advocates, campus police, women's studies and women's centers, psychology of women, criminal justice); (e) e-mailed to university faculty/staff colleagues of both the primary author and various University of Maryland faculty/staff members (with attention to geographic diversity nationally); (f) e-mailed to specific University of Maryland student distribution lists (e.g., resident assistants; sororities and fraternities; academic colleges/departments including behavioral sciences (BSOS), psychology, education, public health, criminal justice,

computer science, and women's studies); and (g) e-mailed to the personal family/friend/colleague network of the primary author.

Response rate. Due to the snowball sampling methodology used, it was difficult to determine a traditional response rate for the sample (i.e., a rate based on how many individuals received invitations to participate). Attempts were made to request distribution counts from listserv coordinators and individuals forwarding the survey advertisement, but there were only a few responses to this request. However, two additional methods were used to approximate a survey completion rate based on how many individuals received the invitation and decided to click on the survey link. First, SurveyMonkey calculated a survey response rate (the total number of participants who completed the survey [defined as clicking the "Done" button on the final page of the survey] divided by the total number of participants who started the survey [defined as having answered at least one question and clicked "Next" at the bottom of the first page of the survey]). This calculation yielded a survey completion rate/survey response rate of 67.5% (603 participants completed the survey; 893 participants started the survey). Second, a hit counter was installed on the first page of the online survey as a more rigorous assessment of how many individuals responded to the survey invitation (i.e., clicked on the link for the survey and saw the first page). Using this more stringent measure of who responded to the survey invitation, two survey completion rates were calculated: 45.4% (603 survey completions out of 1,327 participants who clicked on the survey invitation link) and 34.1% (452 completed and useable surveys post-data cleaning, out of 1,327 participants who clicked on the survey invitation link). (Details regarding the procedures that were followed in cleaning the data can be found on Page 85.)

Online Survey

Survey posting and invitations. The finalized survey was posted on the Web through a secure, online instrument service (SurveyMonkey.com). E-mail invitations informed participants about the topic of the study, indicated that the survey was brief and anonymous, and advertised the \$50 prize lottery. At the end of the e-mail, participants were provided with a link to the study website.

Survey content. The initial survey page welcomed participants and included a detailed informed consent statement, to which participants responded “I accept” or “I do not accept.” The second page requested demographic information about the participant’s age; race/ethnicity; sex; sexual orientation; current relationship status; academic year/status; information describing the size, type, and location of the participant’s college/university; and how the participant learned about the survey. The body of the survey included a measure of Cyberstalking Victimization (including an open-ended response item requesting that the participant describe her/his worst cyberstalking experience), measures of psychological trauma and academic impact, a financial impact item, a coping resilience measure, coping response items, and items regarding reporting/reporting satisfaction. The final pages of the survey included a debriefing statement, a page explaining the prize lottery and offering the option of entering an email address to participate (a statement was included to remind the participant that e-mail addresses would not be linked with survey data), and a listing of cyberstalking prevention and response resources (see Appendix J).

Survey collectors. Eleven “collectors” (unique e-mail links connecting to the same survey) were used to organize survey respondents by recruitment source (e.g., Facebook,

campus victim advocates/prevention educators, University of Maryland student listservs). This permitted an ongoing tracking of which recruitment sources were generating the most participants and also provided the option of examining data from specific target groups (e.g., University of Maryland campus).

The settings selected were identical for all 11 collectors. Multiple responses per computer were permitted, given that students potentially could have been accessing the survey from any number of campus computer labs. Respondents were permitted to go back to previous pages to update their existing responses until they completed or exited the survey. Participants' IP addresses were not stored in the survey results to protect anonymity.

Recruitment e-mails did not contain a randomly-generated unique identifier, as has been used in some online studies (e.g., Wei, Russell, Mallinckrodt, & Zakalik, 2004) to limit participation to a specific subject pool and to ensure that participants respond only once to the survey. Instead, this study relied on subject self-selection based on reading the invitation and accepting the informed consent statement (i.e., college/university student in the U.S. who had experienced cyberstalking), as well as on the initial page of the Cyberstalking Victimization Questionnaire section of the survey, which was designed to screen out participants who had not been cyberstalked. With regard to protecting against repeat-participants, this study relied on the assumption that students would not be that motivated to repeat a 20-minute survey. A check of the qualitative descriptions of participants' worst cyberstalking experiences (provided by most but not all participants) did not identify any identical or highly similar statements.

Data Preparation

Survey responses were downloaded in two groups; the first batch was downloaded on Dec 21, 2007 and the second batch was downloaded on February 16, 2008; a total of 895 participant responses were downloaded. Steps for cleaning the data were followed strictly for both groups, which allowed for smooth merging of the data sets. The data cleaning process yielded 452 participants. Participants were removed from the dataset if they (a) checked the box “I have NOT been cyberstalked” on the Cyberstalking Victimization Questionnaire item that asked participants to identify whether they had experienced cyberstalking behaviors anytime during their lifetimes (190 participants), (b) stopped filling out the survey before the Impact of Event Scale-Revised (Weiss & Marmar, 1997) items (251 participants), and (c) provided what appeared to be irregular or nonsense responses in the multiple-choice and/or open-ended items (2 participants). All email addresses were de-linked from survey responses and kept in a separate file. In addition, qualitative responses were removed from the main dataset, as they were not the focus of the present quantitative study; however, these open-ended responses of participants were used to support recategorization and inclusion of “other” data and to check the consistency and validity of participant responses.

Frequency variable. Participant data for the Cyberstalking Victimization questionnaire items measuring frequency, duration, and relationship length were converted to a single unit of time (i.e., days or times per day). After downloading the first batch of participant responses, it became clear that respondents had not followed the directions for the cyberstalking frequency item (“How frequent were the behaviors? Please enter a number in the most appropriate row: times per day, times per week, times

per month”); a number of participants had filled out more than one row in a way that was not mathematically equivalent. In these cases, the times per week data were selected as representative of the frequency of cyberstalking behaviors and then converted to times per day. An alteration to the survey was made after this discovery; the restrictions for the cyberstalking frequency survey item were changed to allow “exactly one” vs. “at least one” response in the per day/week/month boxes; however, the problem recurred in the second group of data and thus the same procedures were used to convert the frequency data.

Sex/sex orientation variable. The victim’s sex, the victim’s sexual orientation, and the pursuer’s sex likely interact in contributing to how traumatized a victim will be in the face of cyberstalking victimization. However, the makeup of the present sample did not provide subsamples large enough to explore that 3-way interaction. Therefore, the present study used a 2-way interaction between the sex and sexual orientation of the victim as a simpler modification of the complex intersections of these subject variables; this helped to create a slightly better distribution of the respondents across the four sub-groups.

CHAPTER 4: RESULTS

Relationships among the constructs in the present study were analyzed using bivariate correlations, hierarchical multiple linear regression, hierarchical binary logistic regression, multiple linear regression, and chi square tests of independence. In addition, a factor analysis was conducted to examine the properties of a new measure used in the study. Critical values for all tests of statistical significance were set at .01.

Preliminary Analyses

Preliminary analyses included checking the distribution properties of the data; running descriptive statistics; and exploring group differences on specific variables of interest in the study.

Outliers and Correcting for Violations of Normality

A total of two outliers were identified within the distributions for the duration and frequency variables and initially were removed from the data set. However, the distributions of a number of the key variables in the study were positively skewed and showed positive kurtosis and thus were dummy-coded for the regression analyses. The following predictor variables were dummy-coded for this reason: duration, frequency, and intensity (Frequency x Duration). The identified outliers were returned to the data set prior to the dummy-coding of these variables because normality of the distribution had been eliminated as an issue and these were significant cases demonstrating victimization. Duration and frequency were dummy-coded according to a median split; in the case of each variable, where a number of participants had the median score, the most equal division of the groups was provided by including the median in the second half of the data. A dummy-coded intensity variable was created by combining the (now binary)

duration and frequency variables into High-Low combinations. In addition, the outcome variable in the hierarchical binary logistic regression, academic/career functioning (ICE measure), was dummy-coded into a two-level categorical variable, with “not at all” responses coded as 0 and any responses from “a little bit” to “extremely” coded as 1.

Descriptive Statistics for Variables in the Study

Table 3 reflects the means, standard deviations, and internal consistency estimates for the continuous variables in the study.

Table 3

Means, Standard Deviations, and Reliability Coefficients for Continuous Variables

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Scale Range	α
Count of Cyberstalking Behaviors Experienced	452	5.18	2.79	0-17	
Perceived Threat (TPS-Threat)	452	13.80	7.42	0-30	.85
Psychological Trauma (IES-R)	452	3.25	2.62	0-12	.95

The internal consistency reliabilities of the scales measuring perceived threat and psychological trauma were estimated by calculating Cronbach coefficients; both measures showed adequate internal consistency. An alpha was not calculated for the count variable (i.e., cyberstalking behaviors experienced).

As reflected in Table 3, students in this sample experienced an average of five types of unwanted cyber-pursuit behaviors, with a participant range of 0-14 (out of a possible 17) behaviors experienced. Overall, students reported moderate levels of perceived threat, with a wide range of students who experienced everything from no or low levels of fear or threat to the highest possible levels of fear or threat. With regard to

reported traumatic symptoms, students on average experienced modest levels of psychological intrusion, avoidance, and hypervigilance as a result of their cyberstalking victimization incidents. However, although there was less variability around the mean in comparison with the perceived threat variable, there were still students representing both ends of the traumatic symptom spectrum—from no symptoms to almost the highest possible levels of trauma on this measure.

Self-defined cyberstalking victimization. Participants were provided with the definition of cyberstalking (i.e., repeatedly pursued or monitored by another person/persons; through a computer, cell phone or another type of technology; in a way or to a degree that caused them to feel threatened or afraid) and asked if they had been cyberstalked anytime during their lifetimes. Almost half of the students ($n = 206$; 45.6%) met the above legal criteria for cyberstalking victimization. A little more than half ($n = 246$; 54.4%) indicated that they had “experienced some of these behaviors but did not feel threatened or afraid.” For the remainder of this document, these groups of participants will be referred to as the “cyberstalked” and “cyberstalked-no threat/fear” groups.

Cyberstalking behaviors experienced. Students in the sample endorsed the full range of possible cyberstalking behaviors. Figure 1 shows a comparison of percentages for each type of cyberstalking behavior experienced by students in this sample ($N = 452$ for all items).

Insert Figure 1 here

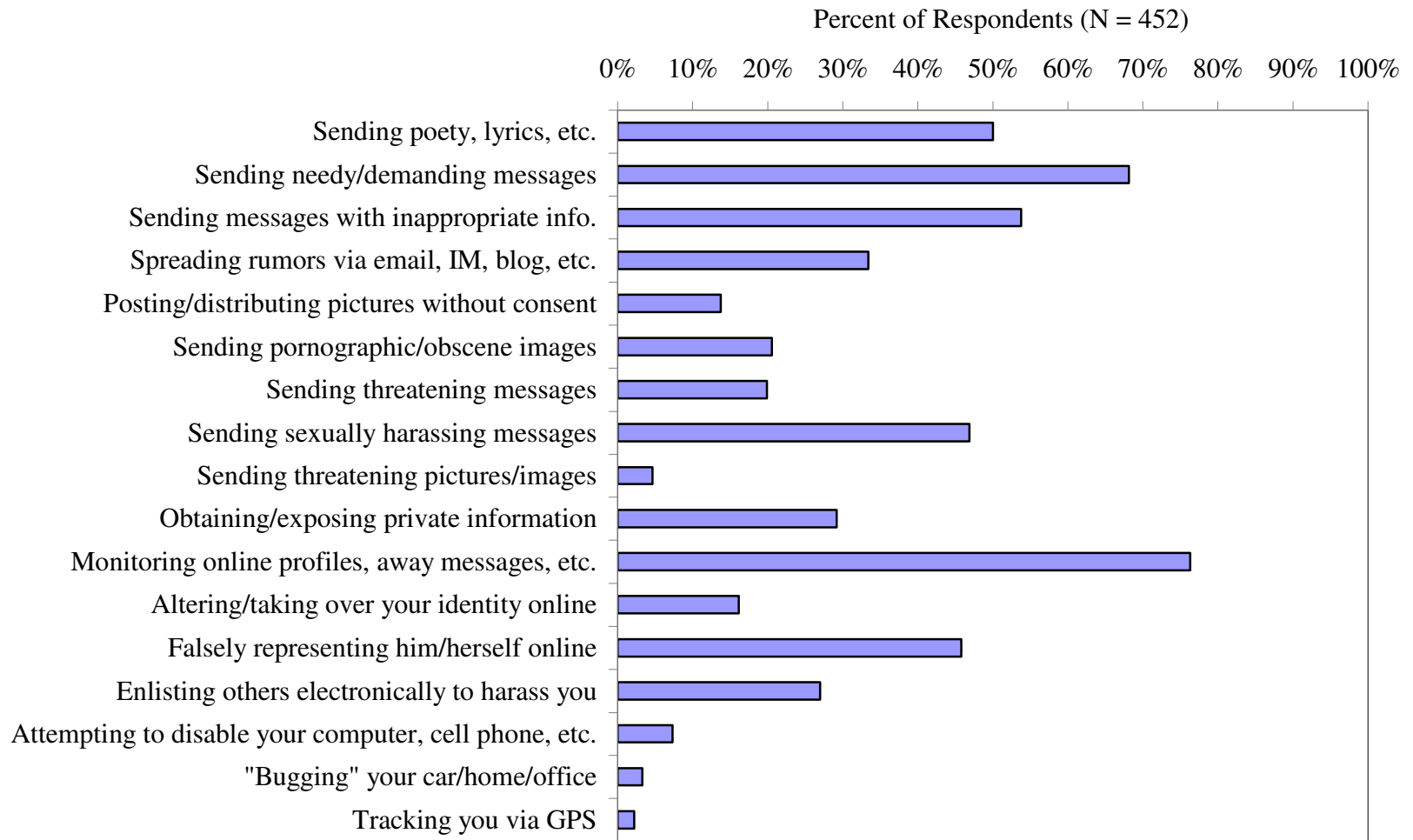


Figure 1. Cyberstalking Behaviors Experienced

The most frequently experienced pursuit behaviors were having online profiles, away messages, etc. monitored (76%); being sent needy or demanding messages (68%); being sent messages with inappropriate information about the sender's life, body, family, sexual experiences, etc. (54%); being sent poetry, song lyrics, e-cards, or messages implying a more intimate relationship than one had with the stalker (50%); being sent sexually harassing messages that commented on one's appearance, described hypothetical sex acts with the stalker, made sexually demeaning remarks, etc. (47%); and the stalker falsely representing him/herself online or via another electronic medium (46%). Percentages for the remaining cyberstalking behaviors experienced by students in the sample were as follows (in descending order of frequency): the spreading of rumors or embarrassing information via email, I-M, text message, online profiles, blogs, etc. (33%); obtaining and/or exposing private information without permission (29%); enlisting others electronically to harass the recipient online or offline (27%); receiving pornographic/obscene images or messages that seemed targeted at the recipient (as opposed to spam) (21%); receiving messages that directly or indirectly threatened to harm the recipient or the recipient's friends/family/pets/possessions, etc. (20%); having one's electronic identity or persona altered or taken over (16%); having pictures of oneself posted or distributed online without consent (14%); having someone attempt to disable a computer, cell phone, etc. (7%); being sent threatening pictures or images (5%); having one's car, home, or office "bugged" (3%); and having one's whereabouts tracked using a global positioning system (GPS) device in a cell phone, car, etc. (2%).

Sex of pursuer. The overwhelming majority of cyberstalkers in the current study ($N = 450$) were male (73%), followed by female (17%) and unknown/other (10%) cyberstalkers.

Prior relationship with pursuer. Participants reported the type of relationship they had had with their pursuer immediately prior to the onset of the cyberstalking behaviors. Table 4 shows percentages for each type of prior relationship ($N = 452$); the lines dividing the prior relationship types indicate the groupings for the three general prior relationship categories that were used in the main analyses for the study (dating/intimate partner, acquaintance/family, and stranger/unknown).

Insert Table 4 here

The acquaintance/family member category was the largest, accounting for 42.5% of the cyberstalking; this group included family members/relatives, friends, individuals who had been in a service provider/customer relationship with the victim, work colleagues, acquaintances, and online acquaintances/buddies. Cyberstalkers who were unknown or strangers to the victim accounted for 33.0% of the unwanted pursuit behaviors, and dating/intimate partners (including estranged/separated/ex-spouses or partners, spouses/committed partners, serious dating partners, or casual dating partners) represented 24.6% of cyberstalkers.

Table 4

Prior Relationship With Cyberstalker

Prior Relationship With Cyberstalker	Percent of Participants
Estranged/separated/ex-spouse	2.4
Spouse/committed partner	.9
Seriously dating	11.1
Casually dating	10.2
Family member/relative	.4
Friend	9.3
Service provider/customer relationship	1.3
Work colleague	3.5
Acquaintance	16.4
Online acquaintance/buddy	11.5
Stranger	22.6
Unknown	10.4
Total	100.0

Note. Lines within the table separate the three general categories used in the main analyses for the study: dating/intimate partner, acquaintance/family, and stranger/unknown.

Life period during which cyberstalking occurred. Students indicated during which time period of their lives the cyberstalking incident that they recounted had occurred. Over half of the sample (58%) reported an experience that had happened during college; other reported time periods for the students' cyberstalking victimizations (in decreasing order) were high school (22%), graduate school (8%), post-high school (4%), post-college (4%), and grade school/middle school (4%).

How pursuer obtained contact information/information about victim. Student victims ($N = 450$) reported a variety of sources from which their pursuers obtained their personal information. In descending order of frequency, they were: "from me" ($n = 140$, 31%); online ($n = 131$, 29%); "don't know" ($n = 84$, 19%); mutual friend/acquaintance ($n = 57$, 13%); and other (38, 8%), which included indirect contacts, previous relationship with pursuer, school directory, observed in a computer lab, computer hacking, and a combination of a number of sources. Of those students who reported that their cyberstalkers had obtained their information online ($n = 131$), most attributed the source to an online networking site: 57 (44%) stalkers had gotten their information from Facebook and 31 (24%) had secured the data from MySpace. Other sources ($n = 43$, 33%) included Google, chat rooms, AOL/AIM, university directory/website, Yahoo, and a combination of online sources.

Financial loss due to cyberstalking victimization. Nine percent ($n = 41$) of the study participants reported financial losses that they had incurred as a result of their cyberstalking victimization. While only a minority of the sample, participants who experienced financial impacts of cyberstalking reported fairly substantial to extreme losses, including the following: needing to purchase a new cell phone/IPOD, cell phone

plan, or phone number; purchase of a new computer due to vandalism; purchase of new email client/new computer software with stronger filters for identity protection; money stolen from bank accounts; loss of income due to lost work time, a lost job, or reduced or interrupted access to commercial websites; lost real estate (homes) and moving costs; and legal costs for filing protection orders. Those participants who experienced financial loss as a result of their cyberstalking victimization also reported more severe victimization and psychological trauma compared to participants who reported no financial loss. Mean scores for victimization (as measured by number of cyberstalking behaviors experienced) were 7.5 ($SD = 3.4$) for the financial loss group and 5.0 ($SD = 2.6$) for the no financial loss group; means scores for trauma were 5.8 ($SD = 3.2$) for the financial loss group compared to 3.0 ($SD = 2.4$) for the no financial loss group.

Group Differences

Pearson's chi-square tests of independence were applied to determine whether there were sample subgroup differences.

Self-defined Cyberstalking Victimization x Victim Sex. A chi-square test was used to determine whether cyberstalking self-definition differed according to the sex of the victim. A significant relationship was found, $\chi^2(1, N = 448) = 10.09, p < .01$, which indicated that females were more likely (49%) than males (30%) to report that they had been cyberstalked and that males were more likely (70%) than females (51%) to report that they had experienced cyberstalking behaviors without feeling threatened or afraid. The degree of the relationship between cyberstalking self-definition and victim sex, two

dichotomous variables, was measured using the correlation coefficient phi ($\phi = .15, p < .01$).

Self-defined Cyberstalking Victimization x Academic Status. A chi-square test was used to explore whether cyberstalking self-definition would differ by participants' academic statuses; this test only approached significance ($\chi^2[1, N = 452] = 6.15, p = .013$), with graduate students more likely to report that they had been cyberstalked (57%) compared to undergraduate students (43%); these results should be interpreted with caution. However, some additional support for this possible relationship is suggested by the significant (though low) correlation between cyberstalking self-definition and academic status ($\phi = .12, p < .01$).

Self-defined Cyberstalking Victimization x University Size, Type, & Location. Chi-square tests were conducted to explore whether self-identifying as having been cyberstalked differed by the size, type, or location of participants' educational institutions. No significant differences were found for any of these variables.

Sex of Pursuer x Sex of Victim. A significant chi-square analysis, $\chi^2(2, N = 446) = 68.86, p < .01$, indicated that females were more likely to be cyberstalked by males and less likely to be stalked by females, and males were more likely to be cyberstalked by females and less likely to be cyberstalked by males. Among male participants ($n = 81$), 47% were cyberstalked by females, 40% were cyberstalked by males, and 14% were unknown. Among female participants ($n = 367$), 81% were cyberstalked by males, 10% by females, and 9% were cyberstalkers of unknown sex.

Sex of Pursuer x Sex/Sexual Orientation of Victim. A chi-square analysis revealed significant differences, $\chi^2(6, N = 444) = 128.95, p < .01$, in pursuer's sex across

categories of sex/sexual orientation. Straight females were more likely to receive cyberstalking behaviors from males (85%) than from females (7%), and straight males were more likely to receive cyberstalking behaviors from females (61%) than from males (25%). While the majority of lesbian/bisexual/other females were stalked by males (62%), they were more likely than the sample at large to be stalked by females (33% vs. 17%) and substantially more likely than straight females to be stalked by a female (33% vs. 7%). The results for gay/bisexual/other males only approached significance, but appeared to support the above trend, in that the adjusted residuals suggested that males in this category were less likely to be stalked by females and more likely to be stalked by males.

Primary Analyses

Hierarchical Multiple Linear Regression: Predictors of Trauma

A hierarchical multiple linear regression was used to address Research Questions 1 and 2. Research Question 1 sought to identify cyberstalking victimization variables that predicted psychological trauma, controlling for the effect of the outcome of the cyberstalking victimization (i.e., whether the cyberstalking behaviors had stopped or were ongoing/unknown). Research Question 2 investigated the potential moderating role of resilient coping in the relationship between cyberstalking victimization and traumatic symptoms.

In the regression model, the covariate (cyberstalking outcome, dummy-coded as “stopped” or “ongoing/unknown”) was entered in Block 1; the main effects of the predictors (self-defined cyberstalking victimization, duration, frequency, intensity, count of cyberstalking behaviors experienced, prior relationship with stalker, victim sex/sexual

orientation, pursuer sex, academic status) and the moderator (resilient coping) were assessed simultaneously in Block 2; and the individual interaction effects (i.e., resilient coping with each of the predictor variables) were entered in Block 3. Table 5 displays the unstandardized regression coefficients (B); their standard errors (SE B); the standardized regression coefficients, or betas (β); the multiple correlation coefficients (R); the squared multiple correlation coefficients (R^2); changes in the squared multiple correlation coefficients (ΔR^2); F values (and their probabilities); and changes in the F values (ΔF).

 Insert Table 5 here

The covariate, cyberstalking outcome, significantly predicted psychological trauma ($F[1, 428] = 17.251, p < .001$). The multiple correlation coefficient (R) for the covariate was .197, indicating that 3.9% of the variance in the levels of traumatic symptoms was accounted for by cyberstalking outcome (i.e., whether the cyberstalking behaviors had stopped or were ongoing/unknown). The linear combination of the nine predictor variables and the moderator variable significantly predicted traumatic symptoms ($F[15, 414] = 20.632, p < .001$).

The multiple correlation coefficient for the model was .654, indicating that 42.8% of the variance in psychological trauma was explained by these variables of interest. The linear combination of interactions between the moderator variable, resilient coping, and each of the predictor variables also was significant ($F[28, 401] = 11.324, p < .001$), but the addition of the interaction terms contributed only another 1.4% to the prediction of variance in levels of traumatic symptoms, for a total of 44.2%.

Table 5

Hierarchical Multiple Linear Regression Analysis: Predictors of Trauma (IES-R)

Predictor Variables	B	SE B	Beta	R	R ²	ΔR ²	F	ΔF
Model 1				0.20	0.04	0.04	17.25**	17.25**
Constant	2.89	0.16						
a. Outcome of CyStalking	1.07	0.26	0.20**					
	B	SE B	Beta	R	R ²	ΔR ²	F	ΔF
Model 2				0.65	0.43	0.39	20.63**	20.10**
Constant	0.13	0.43						
a. Outcome of CyStalking	0.37	0.22	0.07					
b. CyStalking Definition	1.87	0.21	0.36**					
c. Duration of CyStalking	-0.20	0.30	-0.04					
d. Frequency of CyStalking	0.05	0.28	0.01					
e. Intensity of CyStalking	0.37	0.39	0.06					
f. Number of CyStalking Behaviors Experienced	0.27	0.04	0.29**					
g. Prior Relationship: Acquaintance	0.61	0.24	0.11					
h. Prior Relationship: Intimate	1.49	0.28	0.24**					
i. Female; lesbian/bi/other	0.49	0.31	0.06					
j. Male; heterosexual	-0.60	0.34	-0.08					
k. Male; gay/bi/other	-0.52	0.52	-0.04					
l. Pursuer Sex: Female	0.12	0.31	0.02					
m. Pursuer Sex: Unknown	0.54	0.35	0.06					
n. Academic Year	0.25	0.26	0.04					
o. Resilient Coping	0.00	0.03	0.00					

(continued on next page)

Note. * $p < .01$, ** $p < .001$

Table 5 (continued)

Hierarchical Multiple Linear Regression Analysis: Predictors of Trauma (IES-R)

Predictor Variables	B	SE B	Beta	R	R ²	ΔR ²	F	ΔF
Model 3				0.67	0.44	0.01	11.32**	0.76
Constant	0.51	0.99						
a. Outcome of CyStalking	0.34	0.23	0.06					
b. CyStalking Definition	1.07	0.76	0.20					
c. Duration of CyStalking	-1.87	0.97	-0.36					
d. Frequency of CyStalking	0.01	1.00	0.00					
e. Intensity of CyStalking	1.50	1.31	0.25					
f. Number of CyStalking Behaviors Experienced	0.37	0.12	0.39*					
g. Prior Relationship: Acquaintance	0.77	0.74	0.15					
h. Prior Relationship: Intimate	1.32	1.06	0.22					
i. Female; lesbian/bi/other	-0.23	0.93	-0.03					
j. Male; heterosexual	-0.86	1.06	-0.11					
k. Male; gay/bi/other	0.18	1.88	0.01					
l. Pursuer Sex: Female	0.93	1.11	0.13					
m. Pursuer Sex: Unknown	-0.31	1.01	-0.04					
n. Academic Year	1.48	0.89	0.22					
o. Resilient Coping	-0.03	0.09	-0.04					
Interaction: b*o	0.09	0.07	0.19					
Interaction: c*o	0.05	0.09	0.10					
Interaction: d*o	0.00	0.09	0.00					
Interaction: e*o	0.16	0.09	0.30					

*(continued on next page)*Note. * $p < .01$, ** $p < .001$

Table 5 (continued)

Hierarchical Multiple Linear Regression Analysis: Predictors of Trauma (IES-R)

Predictor Variables	B	SE B	Beta	<i>R</i>	<i>R</i> ²	ΔR^2	<i>F</i>	ΔF
Model 3 (continued)								
Interaction: f*o	-0.01	0.01	-0.14					
Interaction: g*o	-0.02	0.07	-0.04					
Interaction: h*o	0.01	0.10	0.02					
Interaction: i*o	0.07	0.09	0.09					
Interaction: j*o	0.02	0.10	0.03					
Interaction: k*o	-0.05	0.18	-0.04					
Interaction: l*o	-0.07	0.10	-0.12					
Interaction: m*o	0.09	0.10	0.10					
Interaction: n*o	-0.12	0.08	-0.19					

Note. **p* < .01, ***p* < .001

According to Cohen (1992), evidence for a moderator effect is noted by an increment in R^2 (ΔR^2) and a statistically significant beta weight for interaction terms entered after the original predictor variables. The effect of the moderator in the present sample did not fulfill the spirit of either of these criteria ($\Delta R^2 = .014$, a minimal improvement from Block 2 to Block 3; no significant beta coefficients for any of the interaction terms in Block 3). Thus, the regression model did not provide any evidence that resilient coping moderated the relationship between cyberstalking victimization and psychological trauma.

Inspection of the standardized regression coefficient of the covariate confirmed that cyberstalking outcome (i.e., ongoing cyberstalking) was a significant predictor of psychological trauma ($\beta = .197, p < .001$). In addition, the standardized regression coefficients of the predictor variables indicated that three of the nine significantly predicted psychological trauma: self-defined cyberstalking victimization ($\beta = .357, p < .001$), number of cyberstalking behaviors experienced ($M = 5.18, SD = 2.79, \beta = .288, p < .001$), and prior relationship with one's cyberstalker (prior dating/intimate partner $\beta = .243, p < .001$). Defining oneself as having been cyberstalked (i.e., having experienced repeated pursuit or monitoring behaviors that caused one to feel threatened or afraid), reporting higher counts of cyberstalking behaviors experienced (i.e., more types of intrusive behaviors), and being stalked by a dating/intimate partner compared to an acquaintance or stranger/unknown pursuer significantly predicted higher levels of traumatic symptomology as measured by the IES-R (Weiss & Marmar, 1997).

The unstandardized regression coefficient (B) for the constant in this model was 0.13 (SE B = 0.43); this represents the level of psychological trauma for an individual

who was a straight, female, undergraduate who reported that the cyberstalking had stopped; who self-identified as having experienced cyberstalking but did not feel fearful or threatened; whose cyberstalking was of low duration, low frequency, and low intensity; who had had no prior relationship with the stalker (i.e., a stranger); and whose stalker was male. A review of the unstandardized regression coefficients indicated that the average trauma score for participants whose cyberstalking victimization was ongoing/unknown (the covariate in the model) was 1.07 scale points higher ($p < .001$) than the mean trauma score for participants whose victimization had stopped. The average trauma score for the group identifying themselves as having been cyberstalked (i.e., they met the legal definition for cyberstalking victimization) was 1.87 scale points higher ($p < .001$) than the mean for the cyberstalked-no fear/threat group. For each additional type of intrusive behavior experienced, victims (both cyberstalked and cyberstalked-no fear/threat participants) registered a .27 increase in traumatic symptoms ($p < .001$). Finally, the average trauma score for participants who reported being cyberstalked by a dating/intimate partner was 1.5 scale points higher ($p < .001$) than the average scores for participants who said their cyberstalker was a stranger/unknown person or an acquaintance.

An examination of the squared semipartial correlations for each of the significant predictor variables indicated the proportion of variance in psychological trauma that was uniquely associated with each predictor beyond all other predictors in the model. Self-defining as having been cyberstalked uniquely accounted for 10.6%, number of cyberstalking behaviors experienced uniquely predicted 6.7%, and being cyberstalked by a dating/intimate partner uniquely contributed 3.8% of the variance in traumatic

symptoms, over and above that which was accounted for by the other predictors in the model. The remaining six variables (duration, frequency, intensity, victim's sex/sexual orientation, pursuer's sex, and academic status) were not significant predictors of psychological trauma.

Checks were made to confirm that neither multicollinearity nor dichotomizing of the continuous variables was contributing to the lack of significance for the other variables in the model. Although multicollinearity was not suspected to be a problem given that the majority of variables in the model were dummy-coded or categorical, the correlation matrix, as well as tolerance and variance inflation factor statistics for all variables in the model, were inspected (note: the correlation matrix and collinearity statistics are based on Pearson's r , the equation for which also is used for calculating phi [for two dichotomous variables] and point biserial correlations [for a dichotomous variable and a continuous variable]). These checks confirmed that multicollinearity was not a problem in the model. In addition, bivariate correlations were run between the duration, frequency, and intensity predictor variables (in their original continuous forms and their dummy-coded forms) and the outcome variable (traumatic symptoms; IES-R), ignoring all other predictors in the model. The results showed significant but small ($r = .127$ to $.240$) relationships for some of the original continuous and dummy-coded variables; this suggested that the dummy-coded frequency, duration, and intensity predictor variables, when included in the regression model, simply could not compete with the other predictors in contributing to the variance in traumatic symptoms. Correlations between the original continuous (skewed) duration and frequency variables and the outcome variable (IES-R) were compared with the corresponding correlations

between the median-split/dummy-coded duration and frequency variables and the outcome variable. Because the difference between the correlations was minimal (the correlation for the median-split frequency variable was .127 and increased to .185 for the continuous frequency variable; the correlation for the median-split duration variable was .204 and increased to .240 for the continuous duration variable), it was concluded that dichotomizing these variables did not lose too much information and thus was not a cause of the non-significant relationships between these variables and the criterion variable.

Hierarchical Binary Logistic Regression: Predictors of Impaired Academic/Career Functioning (ICE)

A hierarchical binary logistic regression was selected to address Research Questions 3 and 4. Logistic regression analyses are appropriate when predicting categorical group membership using either continuous or categorical variables (Hosmer & Lemeshow, 2000). Research Question 3 sought to identify variables that distinguished victims of cyberstalking behaviors reporting impaired academic/career functioning from victims of cyberstalking behaviors who reported no impairment of academic/career functioning. Research Question 4 investigated the potential moderating role of resilient coping in the relationship between cyberstalking victimization and impaired academic/career functioning. In the regression model, the covariate (cyberstalking outcome, dummy-coded as “stopped” or “ongoing/unknown”) was entered in Block 1; the main effects of the predictors (self-defined cyberstalking victimization, duration, frequency, intensity, count of cyberstalking behaviors experienced, prior relationship with stalker, victim sex/sexual orientation, pursuer sex, academic status) and the moderator (resilient coping) were assessed simultaneously in Block 2; and the individual

interaction effects (i.e., resilient coping with each of the predictor variables) were entered in Block 3. Table 6 displays the unstandardized regression coefficients (B); their standard errors (SE B); the Wald statistic, the odds ratios for the predictors (Exp [B]) and the significance values for the omnibus tests of the coefficients for each model (χ^2).

Insert Table 6 here

An omnibus test of the coefficients for Block 1, the model with only the covariate (cyberstalking outcome), was statistically significant, $\chi^2 (1, N = 430) = 8.825, p < .01$, indicating that the outcome of cyberstalking (stopped or ongoing/unknown) reliably differentiated victims who reported impaired academic/career functioning from victims who reported no impairment of academic/career functioning. Zero percent of victims with no academic/career functioning impairment were classified correctly and 100% of victims with academic/career functioning impairment ranging from “a little bit” to “extremely” were correctly classified, yielding an overall success rate of 58.1%. The covariate had a statistically significant Wald value, attesting to its unique contribution to victims’ academic/career functioning status. The odds ratio, which indicates how much more or less likely membership in a criterion group is for each unit increase (or decrease, if the sign of the beta coefficient is negative) of each predictor variable, clarified this finding. Unit decreases in cyberstalking outcome (moving from the group in which the cyberstalking behaviors were “ongoing/unknown” to the group in which the behaviors had “stopped”) were associated with very modest increased impairment in academic/career functioning (i.e., .54% increased impairment). Knowing that a student’s

Table 6

*Hierarchical Binary Logistic Regression Analysis:
Predictors of Impaired Academic/Career Functioning (ICE)*

Predictor Variables	B	SE B	Wald	Exp (B)
Model 1 ($\chi^2 = 8.83^*$)				
Constant	0.73	0.17	18.11**	2.08
a. Outcome of CyStalking	-0.62	0.21	8.60	0.54
	B	SE B	Wald	Exp (B)
Model 2 ($\chi^2 = 99.35^{**}$)				
Constant	-1.68	0.53	9.98*	0.19
a. Outcome of CyStalking	-0.38	0.26	2.27	0.68
b. CyStalking Definition	0.88	0.24	13.34**	2.40
c. Duration of CyStalking	0.14	0.33	0.19	1.15
d. Frequency of CyStalking	0.58	0.32	3.29	1.79
e. Intensity of CyStalking	-0.31	0.45	0.46	0.74
f. Number of CyStalking Behaviors Experienced	0.21	0.05	19.99**	1.24
g. Prior Relationship: Acquaintance	0.40	0.27	2.19	1.49
h. Prior Relationship: Intimate	0.85	0.33	6.62	2.34
i. Female; lesbian/bi/other	0.40	0.37	1.19	1.50
j. Male; heterosexual	-0.92	0.40	5.34	0.40
k. Male; gay/bi/other	0.15	0.57	0.07	1.16
l. Pursuer Sex: Female	1.31	0.39	11.48**	3.71
m. Pursuer Sex: Unknown	1.91	0.44	18.78**	6.73
n. Academic Year	-0.12	0.30	0.16	0.89
o. Resilient Coping	-0.01	0.03	0.17	0.99

(continued on next page)

Note. * $p < .01$, ** $p < .001$

Table 6 (continued)

Predictor Variables	B	SE B	Wald	Exp (B)
Model 3 ($\chi^2 = 20.76$)				
Constant	-1.15	1.25	0.85	0.32
a. Outcome of CyStalking	-0.26	0.27	0.95	0.77
b. CyStalking Definition	0.10	0.86	0.01	1.10
c. Duration of CyStalking	-0.48	1.10	0.19	0.62
d. Frequency of CyStalking	1.38	1.16	1.40	3.96
e. Intensity of CyStalking	0.37	1.54	0.06	1.45
f. Number of CyStalking Behaviors Experienced	0.36	0.16	5.13	1.44
g. Prior Relationship: Acquaintance	-1.08	0.87	1.53	0.34
h. Prior Relationship: Intimate	-2.12	1.27	2.77	0.12
i. Female; lesbian/bi/other	0.20	1.09	0.04	1.23
j. Male; heterosexual	0.58	1.30	0.20	1.79
k. Male; gay/bi/other	-2.61	2.18	1.44	0.07
l. Pursuer Sex: Female	1.60	1.45	1.23	4.98
m. Pursuer Sex: Unknown	-1.28	1.24	1.07	0.28
n. Academic Year	1.80	1.08	2.77	6.05
o. Resilient Coping	-0.09	0.11	0.64	0.91
Interaction: b*o	0.09	0.08	1.34	1.10
Interaction: c*o	0.08	0.10	0.56	1.08
Interaction: d*o	-0.07	0.11	0.39	0.93
Interaction: e*o	-0.07	0.14	0.25	0.93
Interaction: f*o	-0.01	0.01	0.87	0.99
Interaction: g*o	0.14	0.08	2.86	1.15
Interaction: h*o	0.28	0.12	5.79	1.33
Interaction: i*o	0.00	0.10	0.00	1.00
Interaction: j*o	-0.16	0.13	1.54	0.86
Interaction: k*o	0.30	0.21	1.93	1.34
Interaction: l*o	-0.01	0.13	0.01	0.99
Interaction: m*o	0.35	0.13	7.39*	1.42
Interaction: n*o	-0.19	0.10	3.57	0.83

Note. * $p < .01$, ** $p < .001$

cyberstalking victimization was ongoing/unknown slightly decreased the odds (by a factor of .54) of academic/career impairment.

An omnibus test of the model coefficients for Block 2, the linear combination of the nine predictor variables and the moderator variable, was statistically significant, $\chi^2(14, N = 430) = 99.351, p < .001$, indicating that the predictors, as a whole, reliably distinguished between victims of cyberstalking behaviors who reported impaired academic/career functioning and victims who reported no impairment of academic/career functioning. With regard to prediction success, 61.1% of victims with no academic/career functioning impairment were classified correctly and 76.8% of victims with academic/career functioning impairment ranging from “a little bit” to “extremely” were correctly classified, resulting in an overall success rate of 70.2%, a substantial increase over the predictive capacity of Block 1. Three of the nine predictors had statistically significant Wald coefficients and thus can be seen as uniquely contributing to impairment in the academic/career functioning of victims. These predictors were: self-defined cyberstalking victimization, count of cyberstalking behaviors experienced, and sex of pursuer (two levels of this variable were significant: female and don’t know/other). The constant in this model had an unstandardized regression coefficient (B) of -1.68 and a Wald coefficient of 9.98 ($p < .001$); this represents the level of academic/career impairment for who was a straight, female, undergraduate who reported that the cyberstalking had stopped; who self-identified as cyberstalked-no threat/fear; whose cyberstalking was of low duration, low frequency, and low intensity; who had had no prior relationship with the stalker (i.e., a stranger); and whose stalker was male. The odds ratios indicated that impaired academic/career functioning was (a) 2.4 times more likely

for students who self-defined as cyberstalked than for students in the cyberstalked-no threat/fear group, (b) 1.2 times more likely as the number of cyberstalking behaviors experienced increased by one, and (c) 3.7 times more likely if the cyberstalker was female and 6.7 times more likely if the cyberstalker was unknown/other.

An omnibus test of the model coefficients for Block 3, the individual interaction effects of the moderator variable, resilient coping, with each of the predictor variables, was not statistically significant, $\chi^2(13, N = 430) = 20.757, p = .078$, indicating that the interaction terms, as a whole, could not reliably differentiate victims of cyberstalking behaviors who reported impaired academic/career functioning from victims who reported no impairment of academic/career functioning. Thus, the regression model did not provide any evidence that resilient coping moderated the relationship between cyberstalking victimization and impairment of academic/career functioning.

To provide a more concrete picture of the impairment in academic/career functioning, frequency counts of specific items from the ICE (Linn, 1999; revised by this author) were conducted. These confirmed that students in the sample ($N = 430$) experienced major disruptions to their academic goals in the six months following their worst stalking experiences, including taking incompletes in one or more courses (34 students, 8%), dropping or withdrawing from courses (38 students, 9%), and transferring schools (25 students, 6%).

Multiple Linear Regressions Testing Predictor (Cyberstalking Victimization) and Mediating Effects of Perceived Threat on Psychological Trauma, Academic/Career Functioning Impairment, and Formal Reporting

Research Question 5 investigated the mediating effects of perceived threat on the relationship between cyberstalking victimization and three separate outcome variables: (a) psychological trauma, (b) impairment in academic/career functioning, and (c) formal reporting of cyberstalking victimization. For all of the mediations, cyberstalking victimization was operationalized using the only continuous predictor variable from the original hierarchical regression models: number of cyberstalking behaviors experienced. Two of the outcome variables (impairment in academic/career functioning and formal reporting of cyberstalking victimization) were dummy-coded dichotomous variables rather than scale variables (normally distributed scale variables are assumed in a mediational model). The distribution of the dummy-coded impairment in academic/career functioning variable ($N = 439$) was fairly even: 40.9% coded “not at all” and 56.2% coded “a little bit” to “extremely” (2.9% missing). The distribution of the dummy-coded Formal Report variable ($N = 422$) was more extreme: 80.3% “did not formally report” and 13.1% “formally reported” (6.6% missing). Because of the dichotomous nature of these outcome variables, results for these mediations should be viewed with caution, particularly in the case of the more extreme distribution (i.e., Formal Report).

The guidelines proposed by Frazier, Tix, and Barron (2004) were applied to perceived threat (TPS-Threat) to confirm its acceptability as a mediator. First, “the proposed relations between the predictor and the mediator should be grounded in theory and clearly articulated” (p. 126). Research on cyberstalking victimization is in its infancy,

and, thus, there is no specific theory but rather only a few studies that have explored its link with threat perception. These findings suggest that specific threats of harm contribute to trauma in stalking victims (Brewster, 1999, 2002; Kamphuis & Emmelkamp, 2001). Other research studies that have explored students' threat perceptions in reaction to online stalking/harassment scenarios have contributed to an understanding of why perceived threat may mediate the relationship between victimization experiences and trauma; these explanations include previous online or offline stalking/harassment experiences (Alexy et al., 2005) and the online medium itself (Biber et al., 2002). Finally, theory and research from other areas of victimization also provide support for the proposed relationship between victimization and threat, for example, earlier work exploring the role of cognitive appraisals, including threat, in sexual assault and sexual harassment situations (e.g., Fitzgerald & Shullman, 1993; Linn, 1999; Peacock & Wong, 1990).

The proposed mediator, perceived threat, also met the remaining guidelines for the acceptability of mediators. Consistent with the second guideline for mediators, the proposed mediator in the present study clearly can be seen to fit the model in which the predictor (cyberstalking victimization) causes the mediator (the victim perceives a threat)—a variable that has the potential to change—which in turn causes the outcome (trauma, academic/career disruption, or reporting behavior). Third, the mediator met the recommended practical guidelines for choosing mediators (Hoyle & Kenny, 1999; Kenny, Kashy, & Bolger, 1998), that is, the mediator-outcome correlations were either comparable in size or greater than the predictor-mediator correlation. The predictor-mediator (cyberstalking victimization-perceived threat) correlation in the present study (r

= .402) was comparable to that of the mediator-outcome correlations in the case of perceived threat-academic/career impairment ($r = .405$) and perceived threat-formal report ($r = .468$); in the case of perceived threat-trauma, the mediator-outcome correlation was larger ($r = .712$). The mediator-outcome correlation for perceived threat-informal report was only .215 and thus that particular mediation was dropped from consideration. Fourth, the sample had sufficient power (i.e., the sample size was well beyond the recommended minimum of 200 for power of .80 or greater). Fifth, the reliability of the mediator ($\alpha = .85$) was just below the .90 recommended level by Hoyle and Robinson (2003); while this alpha level is not considered low (i.e., less than .70), it is possible that the effect of the mediator on the outcome variable could be underestimated and the effect of the predictor variable on the outcome variable could be overestimated. Having fulfilled the spirit of all of the recommended guidelines, perceived threat, as measured by the Threat Perception Scale-Threat factor, was deemed an acceptable mediator.

Mediating effects of perceived threat on psychological trauma. Following the steps outlined for testing mediation (Frazier et al., 2004), the relationship between the predictor (count of cyberstalking behaviors experienced) and the outcome (traumatic symptoms as measured by the IES-R) was established by regressing IES-R on count of cyberstalking behaviors experienced (Step 1). The unstandardized regression coefficient ($B = .424$) associated with the effect of count of cyberstalking behaviors experienced on traumatic symptoms was significant ($p < .001$). Thus, Path c was significant, and the requirement for mediation in Step 1 was met. To establish that count of cyberstalking behaviors experienced was related to perceived threat (the hypothesized mediator), perceived threat (TPS-Threat) was regressed on count of cyberstalking behaviors

experienced (Step 2). The unstandardized regression coefficient ($B = 1.069$) associated with this relation also was significant at the $p < .001$ level, and thus the condition for Step 2 was met (Path a was significant). To test whether perceived threat was related to trauma symptoms, trauma symptoms (IES-R) was regressed simultaneously on both perceived threat and count of cyberstalking behaviors experienced (Step 3). The coefficient associated with the relation between perceived threat and traumatic symptoms (controlling for count of cyberstalking behaviors experienced) also was significant ($B = .223, p < .001$). Thus, the condition for Step 3 was met (Path b was significant). This third regression equation also provided an estimate of Path c', the relation between count of cyberstalking behaviors experienced and traumatic symptoms, controlling for perceived threat. When that path is zero, there is complete mediation. However, Path c' was .185 and still significant ($p < .001$), although it was smaller than Path c (which was .424).

To assess whether the decrease from .424 to .185 (i.e., from c to c') was significant, a z score of the mediated effect was calculated by dividing the mediated effect by its standard error (see Frazier et al., 2004). If the z score is greater than 2.58, the effect is significant at the .01 level. The z score for the present mediated effect was 7.95. Thus, perceived threat was a significant mediator even though the c' path was significant. The 95% confidence interval around the estimate of the indirect effect was 0.18 to 0.30 (see Frazier et al., 2004 for formula calculations); the confidence interval did not contain zero, which was consistent with the conclusion that there was mediation (i.e., the indirect effect was not zero). An additional way to describe the amount of mediation is in terms of the proportion of the total effect that is mediated, defined by ab/c (Frazier et al., 2004); in

this case, 56% of the total effect of count of cyberstalking behaviors experienced on traumatic symptoms was mediated by perceived threat. In conclusion, there was evidence that perceived threat operated as a partial mediator in the relationship between count of cyberstalking behaviors experienced and traumatic symptoms. That is, more than half the time, the relationship between the amount of cyberstalking victimization experienced and the amount of traumatic symptoms reported was due to a victim perceiving the cyberstalking behaviors as threatening or distressing.

Mediating effects of perceived threat on academic/career functioning impairment.

The relationship between the predictor (count of cyberstalking behaviors experienced) and the outcome (impairment of academic/career functioning as measured by the ICE) was established by regressing academic/career functioning impairment on count of cyberstalking behaviors experienced (Step 1). The unstandardized regression coefficient ($B = .058$) associated with the effect of count of cyberstalking behaviors experienced on traumatic symptoms was significant ($p < .001$). Thus, Path c was significant, and the requirement for mediation in Step 1 was met. The unstandardized regression coefficient ($B = 1.069$) associated with the relationship between count of cyberstalking behaviors experienced and perceived threat (the hypothesized mediator) was significant at the $p < .001$ level, meeting the condition for Step 2 (Path a was significant). The coefficient associated with the relationship between perceived threat and academic/career functioning impairment (controlling for count of cyberstalking behaviors experienced) also was significant ($B = .022$, $p < .001$), thus meeting the condition for Step 3 (Path b was significant). The estimate of Path c', the relation between count of cyberstalking behaviors experienced and academic/career functioning impairment, controlling for

perceived threat, was .035 and still significant ($p < .001$). However, Path c' was smaller than Path c (which was .058).

To assess whether the decrease from .035 to .058 (i.e., from c to c') was significant, a z score of the mediated effect was calculated. The z score was 5.88, which was greater than 2.58 and therefore the effect was significant at the .01 level. Thus, perceived threat was a significant mediator even though the c' path was significant. The 95% confidence interval around the estimate of the indirect effect was 0.02 to 0.03; the confidence interval did not contain zero, which was consistent with the conclusion that there was mediation (i.e., the indirect effect was not zero). Forty-one percent of the total effect of the number of cyberstalking behaviors experienced on academic/career functioning impairment was mediated by perceived threat. In conclusion, there was evidence that perceived threat operated as a partial mediator in the relationship between count of cyberstalking behaviors experienced and academic/career functioning impairment. That is, 41% of the time, the relationship between the amount of cyberstalking victimization experienced and the amount of impairment in academic/career functioning was due to a victim perceiving the cyberstalking behaviors as threatening or distressing.

Mediating effects of perceived threat on formal reporting. The relationship between the predictor (count of cyberstalking behaviors experienced) and the outcome (formal reporting) was established by regressing formal reporting on count of cyberstalking behaviors experienced (Step 1). The unstandardized regression coefficient ($B = .028$) associated with the effect of count of cyberstalking behaviors experienced on formal reporting was significant ($p < .001$). Thus, Path c was significant, and the

requirement for mediation in Step 1 was met. The unstandardized regression coefficient ($B = 1.069$) associated with the relationship between count of cyberstalking behaviors experienced and perceived threat (the hypothesized mediator) was significant at the $p < .001$ level, meeting the condition for Step 2 (Path a was significant). The coefficient associated with the relationship between perceived threat and formal reporting (controlling for count of cyberstalking behaviors experienced) also was significant ($B = .021, p < .001$), thus meeting the condition for Step 3 (Path b was significant). The estimate of Path c', the relation between count of cyberstalking behaviors experienced and formal reporting, controlling for perceived threat, was .005 and was no longer significant ($p = .371$). Path c' also was smaller than Path c (which was .028).

To assess whether the decrease from .028 to .005 (i.e., from c to c') was significant, a z score of the mediated effect was calculated. The z score was 7.48, which was greater than 2.58 and therefore the effect was significant at the .01 level, providing confirmation that perceived threat was a significant mediator. The 95% confidence interval around the estimate of the indirect effect was 0.017 to 0.028; the confidence interval did not contain zero, which was consistent with the conclusion that there was mediation (i.e., the indirect effect was not zero). Eighty percent of the total effect of the number of cyberstalking behaviors experienced on formal reporting was mediated by perceived threat, providing strong support for the partial mediating role of perceived threat in the relationship between count of cyberstalking behaviors experienced and formal reporting. That is, 80% of the time, the relationship between the amount of cyberstalking victimization experienced and victims' decisions to formally report their

cyberstalking victimization was due to victims' perception of the cyberstalking behaviors as threatening or distressing.

In conclusion, there appears to be evidence for perceived threat (as measured by the TPS-Threat subscale) as a partial mediator. A good deal of confidence can be placed in the partial mediation demonstrated with the continuous outcome variable (trauma; IES-R), and the other two partial mediations, whose results should be viewed more cautiously, are consistent with this finding.

Frequencies and Chi Square Tests of Independence: Victims' Coping Responses

Research Question 6 investigated the coping responses exhibited by students who experienced cyberstalking behaviors. Specific areas of exploration included (a) which coping responses were most often used by victims and how effective these responses were in reducing or stopping the unwanted pursuit behaviors, and (b) whether the reported effectiveness of specific coping responses differed by the sex of the victim, self-definition of victimization, or type of prior victim-pursuer relationship. Frequency counts and Pearson's Chi-Square Test of Independence were used to address these questions.

Coping responses used and reported effectiveness. Figures 2 and 3 provide visual representations of the frequency and effectiveness of coping responses used by participants in the sample.

 Insert Figures 2 & 3 here

Victims of cyberstalking behaviors reported using the following coping responses (listed in descending order by frequency of use; $N = 428$; see Figure 2): ignored/avoided

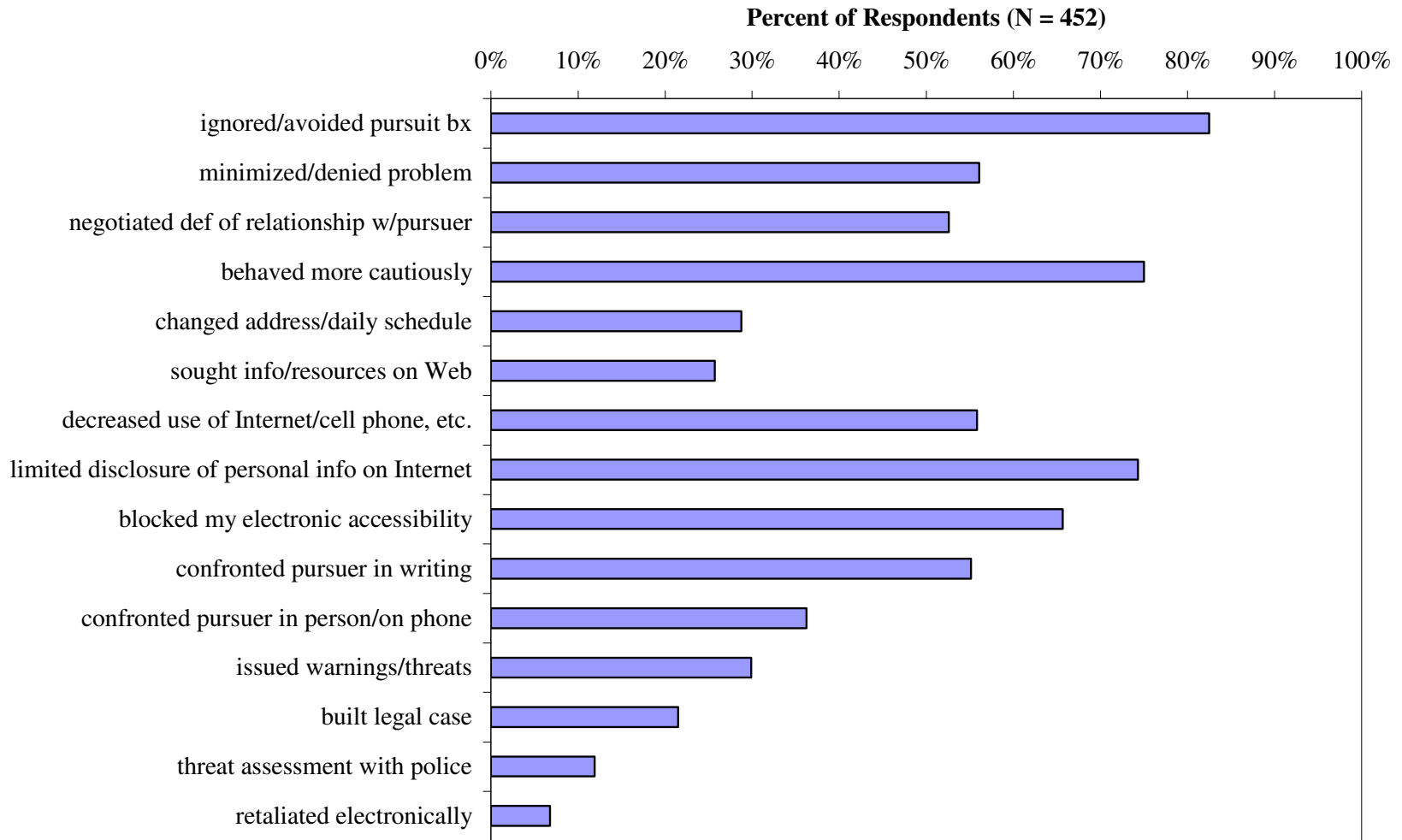


Figure 2. Frequency of Coping Responses Used in Reaction to Cyberstalking Behaviors

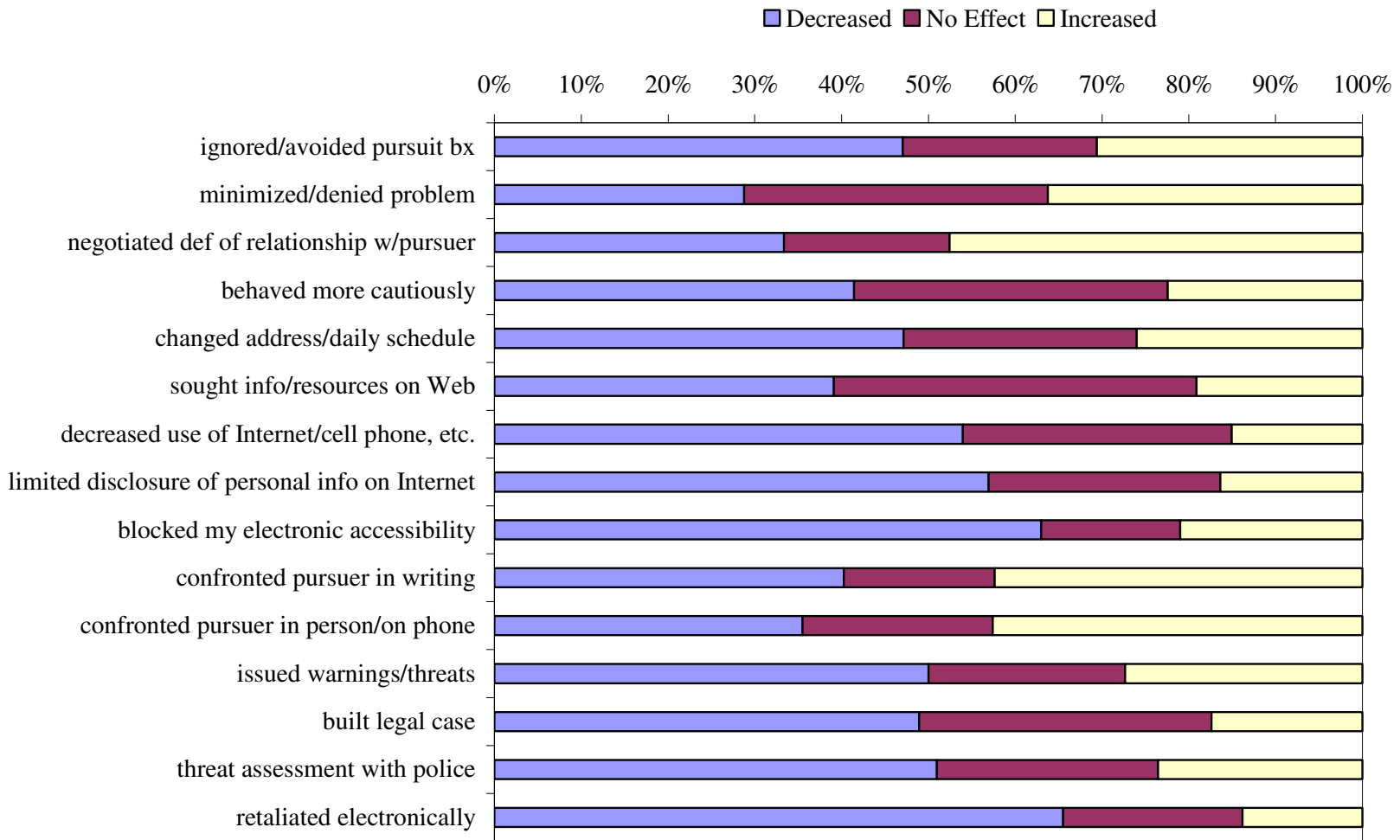


Figure 3. Effect of Coping Responses on Cyberstalking Behaviors

the pursuit behaviors (82.5%; $n = 353$), behaved more cautiously (75.0%; $n = 321$), limited disclosure of my personal information on the Internet (74.3%; $n = 318$), blocked my electronic accessibility (65.7%; $n = 281$), minimized or denied the problem (56.1%; $n = 240$), decreased use of Internet, cell phone, etc. (55.8%; $n = 239$); confronted my pursuer in writing (55.1%; $n = 236$); negotiated the definition of your relationship with your pursuer (52.6%; $n = 225$); confronted my pursuer in person/on the phone (36.2%; $n = 155$); issued warnings/threats (29.9%; $n = 128$); changed my address or daily schedule (28.7%; $n = 123$); sought information/resources on the Web (25.7%; $n = 110$); built a legal case (21.5%; $n = 92$); met with police to do a threat assessment (11.9%; $n = 51$); and retaliated using electronic methods (6.8%; $n = 29$).

Victims also reported whether their coping responses decreased, had no effect on, or increased the cyberstalking pursuit behaviors. Percentages for the coping responses in each of these categories of effectiveness are reported below in descending order; percentage figures are based on the total number of students who used the particular coping response (see Figure 3). The coping responses reported to be most effective in decreasing the cyberstalking behaviors were: retaliated using electronic methods (65.5%; $n = 29$); blocked my electronic accessibility (63.0%; $n = 281$); limited disclosure of my personal information on the Internet (56.9%; $n = 318$); and decreased use of Internet, cell phone, etc. (54.0%; $n = 239$). Percentages for the remaining coping responses reported to decrease the cyberstalking behaviors were as follows: met with police to do a threat assessment (51.0%; $n = 51$), issued warnings/threats (50.0%; $n = 128$), built a legal case (48.9%; $n = 92$), changed my address or daily schedule (47.2%; $n = 123$), ignored/avoided the pursuit behaviors (47%; $n = 353$), behaved more cautiously (41.4%;

$n = 321$), confronted my pursuer in writing (40.3%; $n = 236$), sought information/resources on the Web (39.1%; $n = 110$), confronted my pursuer in person/on the phone (35.5%; $n = 155$), negotiated the definition of my relationship with my pursuer (33.3%; $n = 225$), and minimized or denied the problem (28.8%; $n = 240$).

The coping responses reported to be least effective (i.e., the greatest number of participants said that these coping responses increased the unwanted cyberstalking behaviors) were: negotiated the definition of your relationship with my pursuer (47.6%; $n = 225$), confronted my pursuer in person/on the phone (42.6%; $n = 155$), and confronted my pursuer in writing (42.4%; $n = 236$). Percentages for the remaining coping responses reported to increase the cyberstalking behaviors were as follows: minimized or denied the problem (36.3%; $n = 240$); ignored/avoided the pursuit behaviors (30.6%; $n = 353$); issued warnings/threats (27.3%; $n = 128$); changed my address or daily schedule (26.0%; $n = 123$); met with police to do a threat assessment (23.5%; $n = 51$); behaved more cautiously (22.4%; $n = 321$); blocked my electronic accessibility (21.0%; $n = 281$); sought information/resources on the Web (19.1%; $n = 110$); built a legal case (17.4%; $n = 92$); limited disclosure of my personal information on the Internet (16.4%; $n = 318$); decreased use of Internet, cell phone, etc. (15.1%; $n = 239$); and retaliated using electronic methods (13.8%; $n = 29$).

Frequencies for the coping responses reported to have had no effect on the cyberstalking behaviors were: sought information/resources on the Web (41.8%; $n = 110$); behaved more cautiously (36.1%; $n = 321$); minimized or denied the problem (35.0%; $n = 240$); built a legal case (33.7%; $n = 92$); decreased use of Internet, cell phone, etc. (31.0%; $n = 239$); changed my address or daily schedule (26.8%; $n = 123$);

limited disclosure of my personal information on the Internet (26.7%; $n = 318$); met with police to do a threat assessment (25.5%; $n = 51$); issued warnings/threats (22.7%; $n = 128$); ignored/avoided the pursuit behaviors (22.4%; $n = 353$); confronted my pursuer in person/on the phone (21.9%; $n = 155$); retaliated using electronic methods (20.7%; $n = 29$); negotiated the definition of your relationship with your pursuer (19.1%; $n = 225$); confronted my pursuer in writing (17.4%; $n = 236$); and blocked my electronic accessibility (16.0%; $n = 281$).

Coping Responses x Sex of Victim. Pearson's Chi-square Tests of Independence were applied to investigate whether specific coping responses had the same effect for women and men. These analyses revealed no significant differences between women and men with regard to which coping responses were reported to decrease, increase, or have no effect on the cyberstalking behaviors experienced. One coping response, negotiating the definition of the relationship with the pursuer, approached significance ($p = .017$), and thus the suggestion that this response may have been more effective for men and less successful for women should be viewed with caution.

Coping Responses x Self-defined Cyberstalking Victimization. Pearson's Chi-square Tests of Independence revealed several significant differences in the reported effectiveness of coping responses between students who self-defined as cyberstalked and those who reported that they had experienced cyberstalking behaviors but were not threatened or afraid. There were significant differences between the cyberstalked and cyberstalked-no fear/threat groups for the coping response "ignored or avoided the pursuit behaviors," $\chi^2(2, N = 353) = 23.97, p < .01$. Students in the cyberstalked category were less likely than students in the cyberstalked-no fear/threat category to report that

this strategy decreased or stopped the unwanted pursuit behaviors (34% vs. 60%) and more likely to report that this strategy increased the unwanted behaviors (40% vs. 22%). Significant differences, $\chi^2(2, N = 240) = 18.00, p < .01$, between the two groups for the coping response “minimized or denied the problem” showed that students who were cyberstalked were less likely than students in the cyberstalked-no fear/threat group to report that this strategy decreased or stopped the pursuit behaviors (17% vs. 42%) and more likely to say that this strategy increased the behaviors (43% vs. 29%). Similarly, significant differences, $\chi^2(2, N = 225) = 21.41, p < .01$, between the two groups for the coping response “negotiated the definition of your relationship with your pursuer” indicated that students who were cyberstalked were less likely than students in the cyberstalked-no fear/threat group to report that this strategy decreased or stopped the pursuit behaviors (19% vs. 48%) and more likely to say that this strategy increased the behaviors (58% vs. 36%). There were significant differences between the cyberstalked and cyberstalked-no fear/threat groups across all effectiveness categories for the coping response “behaved more cautiously,” $\chi^2(2, N = 321) = 26.68, p < .01$. Participants who self-identified as cyberstalked were less likely than participants who self-identified as cyberstalked-no fear/threat to say that behaving more cautiously decreased or stopped the unwanted pursuit behaviors (28% vs. 56%), more likely to say that this strategy increased the pursuit behaviors (28% vs. 17%), and more likely to say that behaving more cautiously had no effect on the cyberstalking behaviors (45% vs. 27%). Significant differences, $\chi^2(2, N = 239) = 14.82, p < .01$, between the two groups for the coping response “decreased my use of the Internet or specific Internet sites, decreased my cell phone use, etc.” revealed that students who were cyberstalked were less likely than

students in the cyberstalked-no fear/threat group to report that this strategy decreased or stopped the pursuit behaviors (43% vs. 66%) and more likely to say that this strategy had no effect on the behaviors (41% vs. 20%). Similarly, significant differences, $\chi^2(2, N = 318) = 29.67, p < .01$, between the two groups indicated that that students who were cyberstalked were less likely than students in the cyberstalked-no fear/threat group to report that limiting disclosure of their personal information on the Internet decreased or stopped the pursuit behaviors (43% vs. 72%) and more likely to say that this strategy had no effect on the behaviors (38% vs. 15%). For the coping response “blocked my electronic accessibility,” there were significant differences, $\chi^2(2, N = 281) = 23.42, p < .01$, between the two groups such that students who were cyberstalked were less likely than students in the cyberstalked-no fear/threat group to report that this strategy decreased or stopped the pursuit behaviors (51% vs. 76%) and more likely to say that this strategy had no effect on the behaviors (25% vs. 7%). For the coping response “confronted my pursuer in writing,” there also were significant differences, $\chi^2(2, N = 236) = 10.94, p < .01$, between the two groups; students in the cyberstalked group were less likely than students in the cyberstalked-no fear/threat group to report that this strategy decreased or stopped the pursuit behaviors (31% vs. 51%) and more likely to say that this strategy had no effect on the behaviors (22% vs. 11%). Finally, there were significant differences between the cyberstalked and cyberstalked-no fear/threat groups on the coping response “confronted my pursuer in person/on the phone,” $\chi^2(2, N = 155) = 17.56, p < .01$. Students who self-defined as cyberstalked were less likely to say that this strategy decreased or stopped the pursuit behaviors (22% vs. 55%) and more likely to report that this coping response increased the unwanted behaviors (52% vs. 30%). Chi-

square tests indicated no significant differences between the cyberstalked and cyberstalked-no fear/threat groups on the six remaining coping responses: changed my address or daily schedule, sought information/resources on the Web, issued warnings/threats, built a legal case, met with police to do a threat assessment, and retaliated using electronic methods. The last three of these coping responses (built a legal case, met with police to do a threat assessment, and retaliated using electronic methods) had low expected cell sizes (i.e., a cell count less than five), which may have contributed to the findings of non-significance for these strategies.

Coping Responses x Prior Relationship With Cyberstalker. Pearson's Chi-square Tests of Independence also revealed several significant differences in the reported effectiveness of coping responses across types of prior relationship with one's cyberstalker. Because of the presence of low expected cells counts for some of the prior relationship categories, types of prior relationship were condensed into three broad categories that were distributed as follows ($N = 452$): stranger/unknown (33.0%, $n = 149$), acquaintance/family (42.5%, $n = 192$), and dating/intimate relationship (24.6%, $n = 111$). (Refer to Table 4 on page 93 for a listing of the specific prior relationship categories within each of the broader categories.)

Significance differences among the three prior relationship categories were found for the coping response "ignored or avoided the pursuit behaviors," $\chi^2(4, N = 353) = 14.88, p < .01$. Students who used this strategy and reported that it decreased or stopped the cyberstalking behaviors were more likely to have been stalked by strangers or unknown persons (39%) and less likely to have been stalked by dating/intimate partners (16%). Students who said this strategy had no effect on the cyberstalking behaviors were

more likely to have been stalked by prior dating/intimate partners; victims of these types of cyberstalkers represented 33% of the “had no effect” group.

Significant differences, $\chi^2(4, N = 225) = 18.53, p < .01$, among the three prior relationship categories for the coping response “negotiated the definition of your relationship with your pursuer” showed that students who were pursued by a stranger or unknown person were more likely to report that this approach decreased or stopped the unwanted cyberstalking behaviors (53%) and less likely to indicate that the strategy had no effect on the behaviors (9%), whereas students pursued by a prior dating or intimate partner were less likely to report that this strategy decreased or stopped the behaviors (24%) and more likely to indicate that this response increased the cyberstalking behaviors (61%). In addition, students pursued by acquaintances or family members were more likely to be represented in the group (65%) who said that negotiating the definition of the relationship with their pursuers had no effect on the cyberstalking behaviors.

Significant differences, $\chi^2(4, N = 321) = 22.32, p < .01$, among the three prior relationship categories for the coping response “behaved more cautiously” revealed that students who were pursued by a stranger or unknown person were more likely to report that this strategy decreased or stopped the unwanted cyberstalking behaviors (56%) and less likely to indicate that the response had no effect on the behaviors (21%), whereas students pursued by a prior dating or intimate partner were less likely to report that this strategy decreased or stopped the behaviors (25%) and more likely to indicate that this response had no effect on the cyberstalking behaviors (52%). Similarly, significant differences, $\chi^2(4, N = 239) = 20.77, p < .01$, among the three prior relationship categories for the coping response “decreased my use of the Internet or specific Internet sites,

decreased my cell phone use, etc.” showed that students who were pursued by a stranger or unknown individual were more likely to report that this strategy decreased or stopped the unwanted cyberstalking behaviors (75%) and less likely to indicate that the response had no effect on the behaviors (14%), whereas students pursued by a prior dating or intimate partner were less likely to report that this strategy decreased or stopped the behaviors (39%) and more likely to indicate that this response had no effect on the cyberstalking behaviors (42%). Finally, for the coping response “confronted my pursuer in person/on the phone,” $\chi^2(4, N = 155) = 25.79, p < .01$, students who reported being pursued by an acquaintance or family member were more likely to say that this approach decreased or stopped the cyberstalking behaviors (48%) and less likely to indicate that the strategy increased the behaviors (23%). Students who reported being pursued by someone with whom they had been in a dating or intimate relationship prior to the cyberstalking were less likely to say that this strategy decreased or stopped the behaviors (17%) and more likely to indicate that confronting their pursuer in these ways increased the cyberstalking behaviors (64%).

Chi-square tests indicated no significant differences among the prior relationship with cyberstalker categories on effectiveness ratings for the ten remaining coping responses: minimized or denied the problem, changed my address or daily schedule, sought information/resources on the Web, limited disclosure of my personal information on the Internet, blocked my electronic accessibility, confronted my pursuer in writing, issued warnings/threats, built a legal case, met with police to do a threat assessment, and retaliated using electronic methods. The last three of these coping responses (built a legal case, met with police to do a threat assessment, and retaliated using electronic methods)

had low expected cell sizes (i.e., a cell count less than five), which may have contributed to the findings of non-significance for these strategies.

Binary Logistic Regressions: Predictors of Informal and Formal Reporting

Two binary logistic regressions were used to address Research Question 8, which sought to identify variables that distinguished (a) victims of cyberstalking behaviors who told someone about their cyberstalking experience from victims of cyber-pursuit behaviors who did not tell anyone (i.e., informal reporting), and (b) victims of cyberstalking behaviors who formally reported their cyberstalking experience from victims who did not formally report.

In both regression models, the predictors (self-defined cyberstalking victimization, duration, frequency, intensity, count of cyberstalking behaviors experienced, prior relationship with stalker, victim's sex/sexual orientation, pursuer's sex, and academic status) were assessed simultaneously in Block 1. Tables 7 and 8 display the unstandardized regression coefficients (B); their standard errors (SE B); the Wald statistic; the odds ratios for the predictors (Exp [B]); and the significance values for the omnibus tests of the coefficients for each model (χ^2).

 Insert Tables 7 & 8 here

An omnibus test of the coefficients for the Informal Reporting model was statistically significant, $\chi^2 (13, N = 421) = 29.296, p < .01$, indicating that the predictors, as a whole, reliably differentiated between victims of cyberstalking behaviors who told someone about their cyberstalking experience from victims of cyberstalking behaviors who did not

Table 7

*Binary Logistic Regression Analysis: Predictors of Informal Reporting*Omnibus Test of Model Coefficients $\chi^2(13, N = 421) = 29.30^*$

Predictor Variables	B	SE B	Wald	Exp (B)
Constant	1.37	0.48	8.21*	3.95
CyStalking Definition	0.83	0.39	4.41	2.30
Duration of CyStalking	-0.24	0.51	0.21	0.79
Frequency of CyStalking	0.03	0.50	0.00	1.03
Intensity of CyStalking	-0.95	0.69	1.90	0.39
Number of CyStalking Behaviors Experienced	0.12	.071	2.77	1.13
Prior Relationship: Acquaintance	0.15	0.37	0.15	1.16
Prior Relationship: Dating/Intimate	1.38	0.67	4.24	3.96
Female; lesbian/bi/other	0.81	0.66	1.51	2.25
Male; heterosexual	-0.28	0.50	0.31	0.75
Male; gay/bi/other	-0.04	0.82	0.00	0.96
Pursuer Sex: Female	-0.19	0.51	0.15	0.83
Pursuer Sex: Unknown/Other	-0.30	0.53	0.31	0.75
Academic Status	0.48	0.52	0.85	1.61

Note: * $p < .01$

Table 8

*Binary Logistic Regression Analysis: Predictors of Formal Reporting*Omnibus Test of Model Coefficients $\chi^2(13, N = 417) = 56.41^{**}$

Predictor Variables	B	SE B	Wald	Exp (B)
Constant	-3.70	0.55	45.95**	0.03
CyStalking Definition	1.49	0.37	16.23**	4.45
Duration of CyStalking	-0.74	0.48	2.37	0.48
Frequency of CyStalking	-0.05	0.45	0.01	0.95
Intensity of CyStalking	0.35	0.62	0.31	1.41
Number of CyStalking Behaviors Experienced	0.17	0.06	8.78*	1.18
Prior Relationship: Acquaintance	-0.16	0.39	0.16	0.86
Prior Relationship: Dating/Intimate	-0.05	0.44	0.01	0.96
Female; lesbian/bi/other	0.59	0.43	1.93	1.80
Male; heterosexual	0.27	0.55	0.24	1.31
Male; gay/bi/other	0.30	0.83	0.13	1.35
Pursuer Sex: Female	-0.37	0.51	0.54	0.69
Pursuer Sex: Unknown/Other	0.67	0.51	1.69	1.95
Academic Status	0.95	0.35	7.24*	2.58

Note: * $p < .01$, ** $p < .001$

tell anyone. With regard to prediction success, 0.0% of victims who told no one were classified correctly and 100.0% of victims who told someone were correctly classified, resulting in an overall success rate of 89.5%. However, this rate did not differ from the classification success rate of the model with only the constant and no predictor variables. Furthermore, none of the predictors had statistically significant Wald coefficients; that is, none of the nine predictor variables uniquely contributed to informal reporting on the part of victims.

An omnibus test of the coefficients for the Formal Reporting model was statistically significant, $\chi^2(13, N = 417) = 56.412, p < .001$, indicating that the predictors, as a whole, reliably distinguished between victims of cyberstalking behaviors who formally reported their cyberstalking experiences from victims of cyber-pursuit behaviors who did not formally report. With regard to prediction success, 98.9% of victims who did not formally report were classified correctly and 10.2% of victims who formally reported were correctly classified, resulting in an overall success rate of 86.3%, an improvement of 0.4 over the classification success rate of the model with only the constant and no predictor variables. Three of the eight predictors (i.e., cyberstalking self-definition, number of cyberstalking behaviors experienced, and academic status) had statistically significant Wald coefficients, attesting to their unique contributions to formal reporting on the part of victims. The odds ratios indicated that formal reporting was (a) 4.5 times more likely for students who self-defined as cyberstalked compared to students in the cyberstalked-no fear/threat group, (b) 1.2 times more likely for each additional cyberstalking behavior experienced by a victim, and (c) 2.6 times more likely for graduate students compared to undergraduates.

Reporting and outcome of reporting. (Note: Participants could check more than one reporting option for each of these two survey items; 298 students chose to do so for informal reporting [$n = 427$] and 30 chose to do this for formal reporting [$n = 422$]). A large majority (84.5%) of the total university student sample ($N = 452$) had told someone about their cyberstalking victimization experience (9.9% told no one; 5.5% did not respond to the question). However, only 13.1% of students of the total sample had formally reported the cyberstalking (80.3% did not formally report; 6.6% did not respond to the question). Informal reports were most frequently made to friends (80.8%), family members (42.9%), roommates/housemates (38.6%), and dating/intimate partners/spouses (32.1%); the most common formal reports were made to police/public safety departments (9.5%) and Internet service providers (5.7%). Students who indicated that they had formally reported were asked if their report or complaint resulted in any campus disciplinary action or legal discipline (e.g., arrest, prosecution conviction, or sentence) for the stalker; the number of students who responded yes was 64 (14.2% of the total sample). Twelve students (18.8%) from this subsample indicated that their reports had resulted in campus disciplinary action (e.g., a week of in-school suspension) and 14 students (21.9%) said that their reports had led to legal discipline for their stalkers. Examples of the open-ended responses regarding legal discipline were: “He was threatened with arrest,” “The police decided not to pursue the case,” “Pretrial hearings resulted in a dismissal of the case,” “No progress at all,” and “Not enough evidence to convict.”

Decision not to report. Participants in the study who indicated that they had not formally reported or filed a complaint ($n = 363$; 80.3% of the total sample) were asked

what contributed to their decisions not to report their experiences; all but two ($n = 361$) students responded. More than half (55.4%) of the students of those who responded indicated that they believed their experience was not serious enough to report; almost a quarter of the sample (21.9%) said that they had handled the problem themselves; and the remaining responses included ignoring the behaviors (8.6%), not knowing to whom to report the cyberstalking (4.7%), and other (9.4%). Qualitative responses in the “other” category included fear of retribution/increased harassment from the cyberstalker, desire for privacy and not wanting to be stigmatized, embarrassment about the obscene nature of the stalker’s communications, workplace politics, and “It didn’t occur to me.”

Reporting satisfaction. Students who indicated that they had formally reported the cyberstalking were asked if they were satisfied with the responses they received. Of the students who responded ($n = 72$; 15.9% of the full sample), 59.7% said they were satisfied and 40.3% indicated they were not satisfied. Participants could indicate both yes and no if they had had different reporting experiences with various offices; four students did so. Examples of the optional qualitative responses were: “Initially, officers, my ISP, and email provider treated me like I was overreacting by filing complaints. It took me two months to get a real response from a professional”; “MySpace and Yahoo both removed his profiles after my complaints (and evidence I sent them). They did this several times, as he kept making new accounts”; “The local and state police were terrible. I got caught in a turf war between two departments...The Public Safety Department of my college was fabulous, however. They gave me pepper spray, a camera for photographing suspicious behaviors, and literature on stalking and what to do”; “The courts/county kept saying unless she committed violence, there really wasn't anything

they could do”; and “My work helped out greatly. The police told me there was nothing they could do unless I filed a restraining order and he violated it”; “I was told it was not stalking if the person was never physically present”; and “Victims’ Advocacy was amazing support.”

Additional Analyses

Length of Prior Relationship With Cyberstalker: Relationships With Psychological Trauma, Impairment in Academic/Career Functioning, Number of Cyberstalking Behaviors, and Type of Prior Relationship With Cyberstalker

Each participant was asked how long the prior relationship with his/her cyberstalker lasted before the pursuit became unwanted. The mean length of relationship was 236.73 days ($n = 425$, $SD = 572.7$), or approximately 8 months. Because the distribution for this variable showed a high level of positive skew and positive kurtosis, the variable was recoded into a binary variable according to a median split, with the median (60 days) falling in the second half of the distribution. A t-test was conducted to compare the two groups (shorter and longer relationship length) on one of the main outcome variables, psychological trauma. The mean IES-R score for the longer relationship group ($M = 3.8$, $SD = 2.7$) was significantly higher than the mean for the shorter relationship group ($M = 2.7$, $SD = 2.5$), $t(423) = 4.43$, $p < 0.001$. Similarly, a chi-square analysis revealed that participants in the longer relationship group were more likely than participants in the shorter relationship group to report impairment of academic/career functioning (67% vs. 47%; $\chi^2[1] = 15.82$, $n = 413$, $p < 0.001$). The longer relationship group also reported experiencing significantly more cyberstalking behaviors than the shorter relationship group on average ($M = 5.6$, $SD = 2.7$ vs. $M = 4.7$,

$SD = 2.7$; $t(423) = 3.44$, $p = 0.001$); number of cyberstalking behaviors experienced was the most robust predictor of trauma in the regression analyses, and may account for the higher levels of trauma in these two groups. Finally, length of prior relationship was strongly related to *type* of prior relationship: of respondents whose stalkers were “stranger/unknown,” 84% were in the short relationship length group; those stalked by a “friend/acquaintance” were nearly evenly divided with respect to relationship length (46% short vs. 54% long); and of those with “intimate” stalkers, 83% were in the long relationship group. This relationship was significant ($\chi^2[2] = 107.13$, $n = 425$, $p < 0.001$) and justified not including relationship length in the larger regression analyses.

Number of Coping Responses: Relationships With Number of Cyberstalking Behaviors Experienced, Psychological Trauma, and Impairment of Academic/Career Functioning

Correlational analyses were used to explore whether relationships existed between the amount of coping used by cyberstalking victims and (a) the number of cyberstalking behaviors experienced, (b) psychological trauma and (c) impairment of academic/career functioning. Pearson’s r was used to calculate the correlation between the number of coping responses used and the number of cyberstalking behaviors experienced; a significant positive relationship was found ($r = .414$). The number of coping responses used by students who experienced cyberstalking behaviors and the measure of psychological trauma (IES-R, Weiss & Marmar, 1997) also was significant and positive ($r = .591$). Finally, a point biserial correlation of the number of coping responses and impaired academic/career functioning (as measured by the ICE; Linn, 1999; adapted from Gerrity, 1994) showed a significant positive relationship ($r_{pb} = .376$), that is, the more

coping responses used by victims of cyberstalking, the more impairment in their academic/career functioning.

CHAPTER 5: DISCUSSION

This section discusses the findings of the study within the context of the existing research on cyberstalking and stalking victimization. It also addresses the limitations of the study. Finally, implications of the present study for future research, clinical and educational practice, and policy/advocacy are explored.

Summary of Findings and Comparison to Existing Literature

Discussion of Preliminary Analyses

University students nationally are experiencing cyberstalking victimization; the experiences of almost half of a sample of undergraduate and graduate students who responded to an advertisement asking them if they had been “stalked online or via text message or any other type of technology” met the legal criteria for cyberstalking victimization. The pursuit behaviors most frequently experienced by students in the present sample (e.g., having online profiles or away messages monitored; being sent needy, inappropriate, or too-intimate messages) were consistent with the most common types of online harassment reported in another college sample (Finn, 2004): e-mail/I-M harassment and unwanted pornography.

Some interesting findings arose with regard to the characteristics of cyberstalkers and their victims. First, students in the sample were stalked most frequently by acquaintances/family members, followed by strangers/unknown persons, and then dating/intimate partners. (These results differ from previous research on “intrusive contact” in college students, in which the majority of initiators had been physically intimate with their targets; Haugaard & Seri, 2004.) However, the negative impact of the cyberstalking on the psychological functioning of victims was the greatest if the

cyberstalker was a dating/intimate partner. That students cyberstalked by dating/intimate partners only represented a quarter of the sample may help to explain why the sample overall did not show extremely high impact scores. Second, the relationships discovered between the sex/sexual orientation of victims and the sex of their cyberstalkers add nuance to the above findings. That heterosexual students are more likely to be cyberstalked by members of the opposite gender and gay/lesbian/bisexual/other students are more likely to be cyberstalked by individuals of the same gender suggests that the cyberstalking behaviors reported by this university sample may have been guided by romantic pursuit scripts, even when the cyberstalkers were not specifically dating/intimate partners. This finding is consistent with the suppositions of cyber-pursuit (Spitzberg & Cupach, 2000) and offline stalking researchers (Haugaard & Seri, 2004), whose definitions and instruments measuring stalking are placed largely in the context of intimate or romantic relationship pursuit.

The study also yielded some important observations about the sex of cyberstalkers and cyberstalking victims. The majority of cyberstalkers in the sample were male, a result consistent with the national prevalence study of offline stalking in the university student population (Tjaden & Thoennes, 1998) but inconsistent with Haugaard and Seri (2004), whose investigation found no relationship between pursuer sex and initiation of intrusive contact in a college sample. Given the small number of male participants relative to female participants in the present study, this finding needs to be viewed with some caution. A national prevalence study of cyberstalking is needed to provide an accurate assessment of the demographic picture of university cyberstalkers. The profile of cyberstalking victims is better known, with a number of studies reporting

higher rates of female victimization for (offline) stalking in college samples (e.g., Fremouw et al., 1997; Haugaard & Seri, 2004) and a national prevalence sample (Tjaden & Thoennes, 1998). The present investigation supported these previous findings, indicating that females were more likely than males to indicate that they had been cyberstalked (i.e., their experiences met the legal definition of cyberstalking) and males were more likely than females to report that they had experienced cyberstalking behaviors without feeling threatened or afraid (i.e., males' experiences did not meet the legal definition of cyberstalking).

These results lend credibility to the supposition that cyberstalking is another crime of interpersonal violence that disproportionately targets women. However, post-hoc analyses with this sample showed no differences between females and males, or across sex/sexual orientation categories, on the amount of cyberstalking behaviors received, the types of behaviors received, or the type of prior relationship the individual had with the cyberstalker. What this seems to clarify, then, is that male and female victims in this sample (regardless of sexual orientation) experienced the same unwanted cyberstalking behaviors, to the same degree, and from the same types of people, but had significantly different emotional reactions to the behaviors. This observation is, in fact, still highly consistent with a lens viewing this crime as part of a larger context of crimes of violence against women. For example, women may feel more vulnerable to attack due to knowledge of, past experiences with, or comparatively more media exposure about crimes of interpersonal violence that are more often directed toward women (e.g., sexual harassment, sexual assault, offline stalking, and physical violence in intimate relationships). More research is needed to investigate how the threat of cyberstalking may

be similar or different for heterosexual women versus lesbian/bisexual/transgender women. Alternatively, the gender differences regarding self-defined cyberstalking victimization could suggest that males experience similar emotional reactions to the cyberstalking but are less comfortable admitting to feeling threatened or fearful. Also, female students who were legally cyberstalked, compared to male students who were legally cyberstalked, simply may have been more motivated to respond to the online survey invitation.

Discussion of Primary Analyses

Cyberstalking victimization and trauma. The tested model of cyberstalking victimization demonstrated excellent predictive capacity, accounting for a substantial portion (42%) of the variance in trauma symptoms. Another strength of the model was that it controlled for ongoing cyberstalking, a recommendation of previous researchers (Mechanic, 2002). The significant predictors in the model (i.e., self-defined victimization, count of cyberstalking behaviors experienced, and being cyberstalked by a dating/intimate partner) have been addressed in previous research on (offline) stalking and trauma; of the non-significant predictors, frequency and duration have been discussed in the literature.

The current study showed significant differences in trauma scores between students who identified as having been stalked and those who indicated they had experienced stalking behaviors but did not feel threatened or fearful. These results are similar to findings of Purcell et al. (2005), who showed higher rates of posttraumatic stress and general psychological impairment in “protracted stalking” versus “short-lived harassment” groups. Purcell et al. also noted rates of posttraumatic symptomatology in

their random community sample to be considerably lower than those observed in clinical settings. Even though the present sample consisted of self-selected victims of cyberstalking behaviors, it is not surprising that a group of currently-enrolled university students (i.e., who are functioning well enough to still be in school) would more resemble a community sample than a clinical sample of acutely-distressed stalking victims.

It appears that having romantic ties to one's pursuer added a level of threat to the cyberstalking behaviors that was not present if the cyberstalker was an acquaintance or was unknown to the victim, perhaps due to victims' past knowledge of the dating/intimate partner's capacity for violence or the stress of being pursued by someone who may possess more information about one's personal life and vulnerabilities. Previous investigations (e.g., Blaauw et al., 2002; Nicastro et al., 2000) have suggested that the majority of offline stalkers are intimate partners (typically males stalking female partners, although this may be due in part to a heterosexual bias in some of the measures) and that stalking by intimate partners is related to psychological trauma (e.g., Blaauw et al., 2002; Brewster (2002); Kamphuis et al., 2003; Mechanic et al., 2000, 2002). Pathé and Mullen (1997) linked PTSD symptoms in prior-intimate-relationship stalking victims to an increased risk of being subjected to violence. Mechanic et al. (2000) tested for partner violence as a confound in investigations of stalking victimization and found that stalking contributed impact over and above partner violence. By contrast, other studies have found no relationship between the type of relationship with one's stalker and trauma symptomology (e.g., Kamphuis & Emmelkamp, 2001; Purcell et al., 2005). Additional investigations of the traumatic effects of cyberstalking should address the potential

confound of partner violence and the ways in which a prior dating/intimate relationship with one's pursuer specifically influences a victim's level of perceived threat.

Consistent with the current study's findings, higher numbers of stalking behaviors imposed on victims have been associated with higher rates of posttraumatic symptoms in community samples of offline stalking victims (e.g., Mechanic et al., 2000, 2002; Nicastro et al., 2000). In contrast to these studies and the current investigation, Purcell et al. (2005) did not find any relationship between the number of harassment methods experienced and either general psychological functioning or posttraumatic symptoms in victims of brief harassment and stalking.

The non-significant findings for three of the four quantitative measures of cyberstalking (frequency, duration, and intensity) were surprising, given previous research demonstrating relationships between longer stalking duration and both fear for one's safety (Haugaard & Seri, 2004) and posttraumatic stress (Kamphuis et al., 2003; Purcell et al., 2005). Blaauw et al.'s (2002) results showed that higher levels of psychopathology were predicted by *shorter* duration and higher frequency ("pervasiveness") of stalking; however, in the Blaauw et al. study, these predictors, along with number of stalking behaviors, explained only 9% of the variance in distress levels. This seems consistent with the smaller contribution of the variables of frequency, duration, and intensity in the present study, but also highly inconsistent with the present study's findings of the substantial impact of the number of stalking behaviors in predicting trauma. Additional study is needed to determine the relative importance of these variables in cyberstalking-related trauma.

Cyberstalking victimization and impaired academic/career functioning.

Cyberstalking victimization also predicted impairment in academic/career functioning; approximately 6-9% of university students reported major disruptions to their courses of study, including taking incompletes or withdrawing from courses and transferring schools. The first known work to report in some depth about the relationship between stalking and academic/career impact, this study is highly consistent with previous documentation of loss of work time and changes in workplace, school, or career in stalking victims (Pathé & Mullen, 1997; Sheridan & Grant, 2007; Tjaden & Thoennes, 1998).

The following variables, in order of significance (highest to lowest) were found to contribute uniquely to impairment in the academic/career functioning of victims: sex of pursuer (don't know/other, and then female), self-defining as cyberstalked, and count of cyberstalking behaviors experienced. The latter two will be discussed first.

As was seen with the effect of cyberstalking victimization on psychological trauma, students' subjective feelings of fear or impending threat are a substantial contributor to how disrupted their functioning will be, in this case, their academic work and career expectations and goals. Similarly, the number of cyberstalking behaviors experienced was found in the present study, as well as previous studies of offline stalking victimization, to contribute significantly to the psychological distress of victims (Mechanic et al., 2000, 2002; Nicastro et al., 2000) and therefore it is not surprising that more intrusive behaviors also would be associated with impairment in students' academic/career functioning.

The findings regarding the substantial impact of the sex of the cyberstalker on academic/career functioning are interesting and inconsistent with the study of offline stalking that found no relationship between sex and initiation of intrusive contact (Haugaard & Seri, 2004). Given that, in the present sample, female cyberstalkers represented only 16% of all the cyberstalking cases (75 out of 450 with reported pursuer sex); victims of female cyberstalkers were more likely to be straight males or lesbian/bisexual/other females; and males were less likely to report feeling threatened or fearful as a result of being cyberstalked, it may have been the case that (a) female-to-female cyberstalking occurred in the context of a dating or intimate relationship, which, as reported above, was found to be related to academic/career disruption and/or (b) straight males who were cyberstalked by females and were affected by it found it more palatable to report disruptions in academic/career functioning than psychological impairment or, because the intrusive behaviors were in fact not fear-inducing for them, the effects on males showed up much more in the academic/career arena. However, post-hoc analyses indicated that women were no more likely to stalk in the context of an intimate relationship. Furthermore, men who were stalked by women were only marginally more likely to have academic/career impairment (17/34, 50%) than men who were stalked by men (14/31, 45%). Thus, neither of these explanations ultimately proved tenable. The finding of significantly lower academic/career functioning for pursuers whose sex is unknown/other seems more intuitive, in that, as noted above, unknown pursuer sex was highly related to one's cyberstalker being a stranger. It likely would be highly distracting for a victim to be receiving intrusive behaviors that were not traceable

to some known source and therefore could disrupt a student's academic work and career goals.

A slightly more confusing result was the modest increase in academic/career functioning when cyberstalking victimization had ceased (the covariate in the regression model: stopped vs. ongoing/unknown); perhaps victims who are being stalked in an ongoing way maintain a certain level of functioning regarding schoolwork and career planning out of necessity and that it is not until the intrusive behaviors stop that the students can let down their defenses and thus experience a delayed impairment in functioning.

Non-significant moderating effects of resilient coping. Kamphuis et al. (2003) had proposed that more active, problem-focused approaches to stalking victimization might increase victims' sense of cognitive control and thus reduce posttraumatic symptoms. The present study, using a measure of resilient coping, addressed this suggestion but found no evidence for a moderating effect of resilient coping on either the relationship between cyberstalking victimization and trauma or the relationship between cyberstalking victimization and impairment of academic/career functioning. Given the independent results showing the ineffectiveness of active engagement with one's pursuer in the present study, future investigations likely should incorporate multiple measures of coping (e.g., coping response measures specific to stalking and cyberstalking, personality assessment instruments, and measures of resilient coping, posttraumatic growth, etc.) in order to gain the fullest picture of the role of cognitive schemas and resilient behaviors in coping with the cyberstalking-related trauma and academic/career impairment.

Cyberstalking victimization and financial loss. Cyberstalking victimization was associated with financial costs for only a small minority of the sample (9%), but these participants reported substantial losses and also were more severely traumatized. Should additional research confirm this relationship, cyberstalking victimization involving financial loss thus could be a useful indicator for decisions regarding allocations of victim assistance funds, counseling resources, etc.

Perceived threat as mediator. Perceived threat was found to play a partial mediating role in the relationships between cyberstalking victimization and these outcomes: psychological trauma, impairment in academic/career functioning, and formal reporting. It is not surprising that appraisal of one's cyberstalking victimization as associated with substantial emotional distress, feelings of fear, and/or direct threats would be related to formal reporting behaviors; however, given how low reporting numbers are for other similar crimes of interpersonal aggression that induce fear (e.g., rape, relationship violence/stalking), this can be seen as a hopeful sign. Better understanding of threat appraisals also may be a critical link in the relationship between experiencing cyberstalking behaviors and experiencing negative psychological or academic/career consequences; this suggests interesting areas for cognitive interventions that might buffer victims from negative outcomes. Theory and research exploring the role of cognitive appraisals, including threat, in sexual assault and sexual harassment situations (e.g., Fitzgerald & Shullman, 1993; Linn, 1999; Peacock & Wong, 1990) lend credibility to the results of the present study. The existing research on stalking/cyberstalking scenarios and perceived threat suggest that the numbing effects of previous online or offline stalking/harassment experiences (Alexy et al., 2005) and the a-contextual, writing-based

online medium itself (Biber et al., 2002) also may be important variables to consider in exploring how or why perceived threat mediates the relationship between victimization experiences and trauma, academic/career functioning, and formal reporting behaviors.

Coping with cyberstalking victimization. Avoidance, the top coping response for this sample, also was reported as the most common response to (primarily) offline stalking in a large national college sample (Fisher et al., 1999, 2000); however, university students in the present sample endorsed much higher rates of use of coping responses overall compared to that sample. Although this strategy was most popular, it was rated as effective by less than half of the students. The participants reported that greater coping response effectiveness (i.e., the responses decreased or stopped the unwanted cyberstalking behaviors) was consistent with limiting one's exposure and accessibility online and electronically and, for a small group of participants, with electronic retaliation. Less effective coping responses, by contrast, were characterized by contact with the pursuer (i.e., negotiating or confronting); despite this, a third to a half of the students in the present sample used this strategy (Fisher et al. [2000] reported that 1 in 6 students used this response). Alexy's (2005) students also reported a combination of confrontive and protective responses: yelling at the stalker; trying to reason, threaten, or plead with the stalker; and screening phone calls. The assessment of contact with one's stalker as less effective by participants in the present study reflects the standard guidelines taught by stalking prevention and response experts to avoid any type of contact with one's stalker. It also is consistent with the findings of Spitzberg and Hoobler (2002), who found that interactional forms of coping (i.e., moving toward/with and moving against) were related consistently with cyberstalking. Cupach and Spitzberg (1998) and many other

stalking experts (e.g., de Becker, 1997) have suggested that victims may unknowingly engage the cyber-stalkers by their responses (i.e., any response is a response, and intermittently reinforced behaviors are the most reinforcing).

The reported effectiveness of 60.0% of the coping responses differed according to whether a student self-defined as cyberstalked and the effectiveness of 33.3% of coping responses differed by the type of prior relationship with one's pursuer; reports of coping response effectiveness did not differ for male and female students. Self-defining as cyberstalked may be related to the lack of effectiveness of coping responses due in part to experiencing a wide range of stalking behaviors; post-hoc analyses confirmed that the mean number of stalking behaviors was significantly greater for those who self-labeled as cyberstalked ($M = 6.2, SD = 2.9$) compared to those who did not ($M = 4.3, SD = 2.4$), $t(450) = 7.617, p < .001$. Self-defining as cyberstalked also was found in the study to be a predictor of psychological trauma; it is highly likely that victims in a state of fear are less likely to perceive that they have control over the unwanted behaviors. The lack of effectiveness of some coping responses also was highly related to who was doing the stalking; prior dating/intimate partners were more intractable cyberstalkers—no strategies seemed to get them to stop, whereas strangers and acquaintances were more likely to cease intrusive behaviors in response to the same strategies. These findings suggest the need for developing coping strategy recommendations for victims that are tailored (e.g., to specific categories of stalkers) rather than universal. Finally, it is surprising that response effectiveness was not different for male and female students, given that more females self-defined as cyberstalked, and self-defined victimization was related to effectiveness of coping responses. Post-hoc chi-square analyses indicated that preferences

for specific types of coping strategies also did not differ for males and females in the present sample, unlike the findings of Fremouw et al. (1997).

The discovered relationships between the number of cyberstalking behaviors experienced and the number of coping responses used by victims, and between the amount of coping used and both trauma symptoms and academic/career impairment, are consistent with previous studies that addressed coping responses in the context of offline stalking. Mechanic et al. (2002) observed that exposure to a greater number, type, and frequency of stalking behaviors was related to increases in coping and help-seeking behaviors. Spitzberg et al. (1998) tested for relationships among obsessive relational intrusion victimization, symptomology, and coping strategies and found that coping responses appeared to increase as symptoms increased. Spitzberg et al. concluded from a mediational analysis that symptoms increase as coping responses increase, regardless of the amount and type of victimization experienced. Whether or not this finding reflects a true mediation, the results suggest an area for additional investigation (e.g., Is the number of coping responses simply a proxy for trauma?, Can the number of coping responses be seen as part of an individual's repertoire and therefore perhaps act more like a moderator?, etc.). The number of coping responses used by cyberstalking victims appears to be an additional useful variable in conceptualizing the role of coping in cyberstalking victimization, and its relationships with other key variables should be investigated further in future work on this topic.

Informal/formal reporting of cyberstalking victimization. A large majority (85%) of the total university student sample had told someone about their cyberstalking victimization experience; however, only 13% of students had formally reported the

cyberstalking. These rates are marginally lower than national prevalence data (Fisher et al., 2000) for university student offline stalking victims (i.e., 17% of stalking incidents reported to the police, compared to 90% reported to a friend, family member, or roommate), perhaps due to a difference in perceived threat for offline versus online stalking. A single-campus study of online harassment (Finn, 2004) found lower rates of formal reporting (6% of 339 students), while Alexy et al.'s (2005) study of cyberstalking and offline stalking victimization in university students reported frequency counts similar to those in the present study regarding whom victims told: friends (75%, vs. 81% in the present study) and family members (54%, vs. 43% in the present sample). Far more students in Finn's (2004) study told their Internet service provider (31% vs. 6% in this sample). Non-report rates and justification for not reporting also were similar for the Alexy et al. sample and the present sample (10% vs. 11% in the present sample; students were more likely to do nothing because they thought the situation would stop).

Self-defined victimization and the number of intrusive behaviors experienced have been shown in this study and previous research to be consistent predictors of trauma and life disruption, so it is not surprising that these factors also were positively correlated with formal reporting behaviors. With regard to the relationship between formal reporting and academic status, it is possible that the increased life experience or confidence that comes with maturity contributed to the difference between graduate and undergraduate students; the mean age of graduate students was 26.85 years ($SD = 3.96$) compared to 20.68 years ($SD = 3.958$) for undergraduates. Another contributing factor could be differences between graduate students and undergraduates in the type of prior relationship they had with their cyberstalkers. More graduate students reported being

cyberstalked by a dating/intimate partner (37.4% compared to 21.3% of undergraduates) and fewer graduate students reported being pursued by strangers or unknown cyberstalkers (20.9% compared to 36.0% of undergraduates). As indicated by the results of the previous analyses in the study, cyberstalking by dating/intimate partners is associated with traumatic symptoms and this level of intrusion may make it more likely that victims will formally report. Alternatively, or conjunctively, undergraduates compared with graduate students may be less likely to make a formal report because they are less likely to know whom to report.

Participants in the study were asked to indicate what contributed to their decision not to formally report their cyberstalking experience. As this item from the survey was adopted from Finn's (2004) Survey of Online Harassment, direct comparisons can be made with that single-campus sample. University students in the present sample more frequently reported that the intrusive behaviors were not serious enough to report (55% vs. 38%). However, they also were less likely to ignore the unwanted behaviors (9% vs. 20%) and seemed more informed about where they could report the behaviors (5% of the present sample said they didn't know to whom to report the cyberstalking compared to 13% from the online harassment study). The samples were similar in the rates of handling the problem themselves (22% for the present study and 20% for the online harassment study). The present study's inclusion of the open-ended "Other" category provided additional insight into other powerful reasons for students' reluctance to report (i.e., fear, embarrassment, stigmatization, work environment support) and suggest the importance of documenting such barriers for the purpose of designing interventions to increase

students' access to and comfort with the judicial and social service systems designed to protect them from criminal acts.

Disciplinary action. Students who indicated that they had formally reported were asked if their report or complaint resulted in any campus disciplinary action or legal discipline (e.g., arrest, prosecution, conviction, or sentence) for the stalker; the number of students who responded yes was 64 (14.2% of the total sample). Spitzberg and Cupach (2001) have indicated that very little is known about the success of campus or judicial reporting for offline stalking victimization, aside from a few studies that indicate a success rate of about 50% for the ability of restraining orders to prevent future contact by the stalker). Thus, even these basic data advance knowledge of disciplinary action for cyberstalking (and also offline stalking) victimization.

Reporting satisfaction. Sixty percent of students were satisfied with their reporting experiences. Finn's (2004) survey of online harassment indicated a somewhat lower rate of satisfaction (approximately 52%). The range of qualitative responses from survey participants about their reporting experiences make evident the critical role of supportive interventions on the part of campus officials, police and judicial officers, victim advocates, and internet service providers. Kamphuis et al. (2003), who observed that satisfaction with social support declined as offline stalking duration increased, also highlighted the necessity for these offices and individuals to continue supporting victims over the long haul, as many stalking victims can find it increasingly difficult to obtain the support and understanding they need from their environments.

Limitations

The present study, one of the first to explore in depth the impact of cyberstalking victimization and victims' responses to this crime, has contributed considerable information regarding this new arena of interpersonal aggression. However, the investigation also had a number of limitations. The following section addresses limitations related to conducting Web-based surveys, the design of the study, and measurement issues.

Web-based Survey Issues

Web technology is fast becoming a popular methodological tool in psychological research. The most frequently cited benefits of online research include more efficient and less expensive data collection as well as easier access to large samples (Reips, 2000). This was certainly the case in the present study. In addition, online research potentially offers an effective methodology for approaching sensitive topics such as cyberstalking. However, Web-based surveys also present inherent challenges, including validity and ethical concerns.

Construct validity. With regard to construct validity, the study would have been strengthened by a comparison of reliability and validity data from both traditional and online studies that have used the same measures as those in the study; due to using a number of modified measures, this was only done for three of the instruments in the study (the ICE, IES-R, and Resilient Coping).

Internal validity. Despite providing directions in the informed consent statement that attempted to address the lack of standardized testing conditions for participants, there was no fail-safe protection against the following internal validity threats: varied settings,

multitasking while completing the survey, environmental distractions or emotionally-affecting incidents, and possible compromising of participant data should browsers not be fully exited.

External validity. One important threat to external validity in online research is sample restriction due to selection bias. Despite the advantages of increased geographical diversity and anonymity provided by online research, and despite attempts in the present study to target minority populations (e.g., GLBT listservs, community colleges), the sample was not as diverse as it might have been with regard to race/ethnicity, sex, sexual orientation, geographical region, and type of college/university. Significant findings regarding underrepresented subsamples (e.g., results regarding the victimization of male participants, or observed trends regarding the sexual orientation of victims and sex of pursuers) should be viewed cautiously. Furthermore, it is important to note that the study, in targeting a university population, excluded a large number of individuals marginalized from postsecondary educations due to financial status, language, and illiteracy.

Recruitment for the study was done online, and the majority of participants came from advertisements forwarded by three (of eleven) primary sources: national women's studies/women's center listservs, a national university violence prevention/advocacy listserv, and University of Maryland campus listservs. Though the survey purposefully targeted a convenience sample due to the decision to conduct a victim impact study rather than a prevalence study, it is possible that this particular sample of university student victims, compared to other student victims nationally, was more aware of and sensitive to issues of interpersonal violence. Another possible sampling bias could have arisen due to students with previous cyberstalking experiences, particularly more traumatic incidents,

being less likely to be online and/or participate in an online survey about cyberstalking. Finally, although checks of the quantitative and qualitative data did not suggest this, it is certainly possible that a non-student or student outside of the country could have completed the survey.

Response rate calculation is a major external validity issue for Web-based surveys. Solutions regarding this issue (e.g., convenience sampling with semi-randomized conditions, limiting the sample to a specific group randomly selected from a larger population) were deemed too complicated to access and track on a national scale. Attempts to have listserv coordinators or recipients provide counts of the numbers of individuals who were forwarded the survey proved unsuccessful. The sensitive, crime-related nature of the topic of study influenced the decision to prioritize both the accessibility of the survey and participant anonymity over other important methodology considerations. Two additional methods thus were used to approximate a survey completion rate based on how many individuals received the invitation and decided to click on the survey link: the SurveyMonkey survey response rate and an invitation response rate generated from the hit counter installed on the first page of the online survey (two response rates were generated through this latter method, one using a stricter definition of survey “completion” that counted only participants from the cleaned dataset). This most conservative calculation indicated that a approximately one of every three people who responded to the invitation to participate in the survey completed it. Compared to typical telephone survey response rates around 60% (Tourangeau, 2004), the 34.1% response rate could be seen as low; however, research suggests that return rates for online surveys (25%; Mathy, Kerr, & Hegdin, 2004; Tourangeau, 2004) are

typically lower than telephone surveys (Kraut et al., 2004; Tourangeau, 2004; Mathy et al., 2004) and lower (Kraut et al., 2004) or equivalent (Mathy et al., 2004) to mail surveys.

Ethical considerations. Due to the study's request for the disclosure of criminal victimization experiences, a primary ethical issue concerned the protection of confidential data shared by study participants. Despite informing participants about the potential threats to confidentiality and the extra measures taken to ensure anonymity of student participants and the confidentiality of their responses, these could have been compromised. According to online research guidelines (e.g., Frankel & Siang, 1999; Reips, 2002), the following may have further protected the participant data: maintenance of the data in protected directories at all times (e.g., password-protecting the memory stick used to save data), having a contingency plan in place for the removal of data in the event of researcher incapacitation, and increased competency regarding technology and privacy protections in order to evaluate the services provided by the online survey provider.

A second major ethical concern arising from the online research context is lack of supervision during participation in the research. The survey, which investigated cyberstalking victimization experiences, could have been traumatizing to individuals filling it out. Students taking this online survey might have felt isolated and less inclined to seek assistance. On the other hand, the completion of the survey itself may have been viewed as a helpful (rather than hindering) intervention that increased awareness on the part of victims (and potentially, perpetrators) about the crime of cyberstalking and that motivated individuals to report and/or seek support from the list of provided resources.

Study Design

Another limitation of the present study was its cross-sectional design; it looks at a national sample of university students at only one point in time. This design thus precludes definite conclusions about the origins of, for example, traumatic symptoms or academic/career impairment, or about the direction of causality among study variables. Given the significant findings regarding the relationships between psychological and academic/career impact and whether cyberstalking victimization had stopped or was ongoing/unknown, time is very likely to have an effect on how a participant fills out the survey items. Ideally, the survey would be longitudinal and track a sample of university students over the course of their university experiences (undergraduate years or graduate years) to identify changing cyberstalking victimization patterns, symptom levels, and coping response patterns at various stages across a number of years.

Measurement

There were several measurement issues in the study to consider. All constructs were measured using survey (self-report) research and thus relied on participants' capacities to assess themselves accurately and provide truthful answers; in addition, the measures were retrospective and focused on victimization experiences; cognitive defenses may have been operating when reading items and recalling victimization experiences, contributing to inaccuracy of responses. Triangulation of data would have been ideal but it was not very practical (e.g., having physiological tests of anxiety/trauma levels; documenting changes in academic performance or majors through review of transcripts). In addition, focusing a study exclusively on students who are current cyberstalking victims would reduce the confounding effects of time and memory.

The dominance of some predictor variables in the regression may indicate the usefulness of a more parsimonious model of cyberstalking victimization, which better distills and clarifies the roles of specific variables related to victimization. In addition, some of the other study constructs (e.g., perceived threat, trauma, academic/career functioning, coping) might have been better measured by other instruments or a combination of instruments, as would be available through more complex statistical analyses (one strength of the study was its attempt to incorporate multiple measures to explain coping of cyberstalking victims). Given the exploratory nature of this topic, some of the measures did not have previous or well-established psychometric validity and reliability, which limited the researcher's ability to identify a context for the sample's performance on these instruments. Finally, the need to dummy-code a number of the study variables meant some loss of the statistical power to explain variance in the regressions.

Implications for Research, Practice, and Policy/Advocacy

This study has highlighted many areas for future research in this “virtually” uncharted area of interpersonal violence. In addition, the results of the present study suggest some important implications for practice, advocacy, and policy with regard to the prevention of and response to cyberstalking victimization on university campuses nationally and in the broader society.

Research

The topic of cyberstalking and cyberstalking victimization is so new and empirical investigations in this area are so rare that any research will add to an understanding of this crime and its impact on victims. The original (and too ambitious)

scope of the present study included a national prevalence study for cyberstalking victimization; a randomized national sample would provide important prevalence data and information about the nature of cyberstalking on university campuses. Students should be assessed as both victims and perpetrators of cyberstalking; this would allow for further exploration of the person- and situation-based contexts for this crime (e.g., differences in victimization vs. perpetration related to gender and sexual orientation, prior relationship contexts for pursuit, etc.). In addition, students' perceptions and labeling of cyberstalking should be investigated, as the present study and other research studies (e.g., Alexy et al., 2005; Biber et al., 2002) suggest that how students view and name the intrusive behaviors they experience may contribute to their heightened or reduced vulnerability in the face of this crime. A broadening of the research population would include teenagers and children, as well as older adults; research addressing the experiences of younger students should incorporate emerging empirical work on cyberbullying (e.g., Beran & Li, 2005; Ybarra, 2004).

Another important area for further research is to continue exploring the similarities and differences between offline stalking and cyberstalking to help answer the question of whether cyberstalking is simply stalking with new technological tools or a distinct crime that affects victims differently because of the unique context of cyberspace (e.g., more psychologically threatening due to its exponentially greater capacity for embarrassing/exposing someone and its lack of geographical and psychological boundaries, potentially more empowering of a victim as a result of access to concrete evidence with which to prosecute a stalker, etc.). Furthermore, as cyberstalking appears to co-occur with offline stalking (this is suggested by the qualitative data collected as part

of the study, not part of the present dissertation analysis, as well as studies of offline stalking that have documented some harassment via technology), and offline stalking has been demonstrated repeatedly to overlap greatly with intimate partner violence, it will be important to delineate the distinct contributions of these related forms of interpersonal aggression.

In addition, most of what is known about (offline) stalking originated from a criminal justice/forensic psychology perspective, which is focused on the behavior and psychology of the criminal. The perspectives of professional psychologists/counselors trained to work with victims of crime are very much needed to develop a research base that reflects the psychological impact of the crimes of stalking and cyberstalking, and thus hopefully can influence how seriously and sensitively judicial (and healthcare, and educational) systems treat victims who report these crimes.

Specific areas for future research that arose from the findings of the present study include addressing how the threat of cyberstalking interacts with prior relationship with pursuers, as well as the gender and sexual orientation of victims and pursuers; retesting variables that measure the intensity of cyberstalking incidents; documenting in more depth the barriers and outcomes to formal reporting of cyberstalking victimization; and evaluating interventions designed to protect and heal victims of cyberstalking.

Finally, with regard to the methodology of the study, the use of more potent statistical analyses in future studies could yield valuable additional information about the direct and indirect relationships among predictor, moderator, mediator, and outcome variables of interest. For example, the present study was able to examine the effectiveness of only one type of coping response at a time in relation to some important

predictor variables; analyses such as multivariate modeling would allow for the possibility of considering all coping strategies with all of the predictors at one time. As another example, it would be useful to test simultaneously whether the model of cyberstalking victimization provides a different fit for cyberstalked versus cyberstalked-no threat/fear groups. More advanced statistical analyses also would require the use of multiple measures for all types of variables in the model, which would allow for a fuller representation of constructs such as psychological impairment, threat, and coping.

Practice

The present study highlights the need for clinical and educational interventions that will assist clinicians and educators in responding to and preventing cyberstalking victimization. Suggestions for both clinical and educational responses are included below.

Clinical interventions. First, mental health intake protocols and primary healthcare patient protocols should include screening for problems related to cyberstalking and offline stalking (Southworth, Finn, Dawson, Fraser, & Tucker, 2007). Also, it is critical that counselors and other faculty and staff members who have contact with victims (e.g., victim advocates, public safety officers, healthcare providers, student development advisors, coaches, resident life staff, etc.) be aware of the serious potential effects of cyberstalking/stalking on the psychological and academic/career functioning of students. While the findings of this study are valid only for the current sample of university students, they suggest possible areas on which to focus when assessing the potential threat and the traumatic impact of cyberstalking victimization on a student, for example: (a) Does the student meet the legal criteria for cyberstalking, that is, s/he reports

feeling threatened or afraid as a result of the cyberstalking behaviors?, (b) How many different types of cyberstalking behaviors have been perpetrated on the student (higher numbers being more predictive of traumatic symptoms)?, and (c) Is the stalker a prior dating/intimate partner or acquaintance of the student (these categories of stalker could be somewhat more predictive of trauma symptoms, or might require different victim coping strategies)? Given the demonstrated connection between cyberstalking/stalking and trauma-related symptoms, and the absence of any research specifically testing clinical interventions with cyberstalking (or offline stalking) victims, clinicians should tentatively apply established knowledge from the field of trauma psychology in treating victims, noting that different interventions may be needed for students experiencing ongoing cyberstalking. In addition, campus counselors, health professionals, and other university staff members should develop competence regarding informing clients who have experienced cyberstalking about reporting options, stalking threat assessments, effective coping responses, and safety planning. This is especially important in light of the reported findings that more than half of students in the present sample believed that their experience was not serious enough to report and, at the other end of the spectrum, that other students feared retribution/increased harassment or stigmatization.

Educational interventions. The findings of the present study point to a heretofore invisible cause of attrition and academic delay and should be of interest to university administrators concerned about retention of students. Staff and faculty on university campuses should be better prepared to assess and address the educational/career impact of cyberstalking victimization, including providing student victims with academic accommodations and also longer-term support for completing missed coursework and

returning to normal academic functioning; these interventions, along with attending to the safety needs of victims, likely will reduce student drop-out and transfers.

More generally, there is a need for increased education of students and broader campus communities about the crime of cyberstalking. Cyberstalking, in the context of a university campus, has the potential to be taken both less seriously and more seriously by both victims and perpetrators. On the one hand, university students' overwhelming focus on relational/sexual connections, combined with developmentally immature social behaviors, produces a disastrous set-up for everything from poor relational communication, to inappropriate boundary violations, to criminal predatory behaviors. When the lines distinguishing these categories of behavior are not clearly drawn, it is no wonder that students will joke about "stalking" potential relationship/sex interests and find it difficult to name when they or their friends have been victims of criminal acts. Similarly, Instant Messenger (I-M) conversations among students can be sexually suggestive and often play with anonymity (e.g., a friend will tease, "I've been watching you" and later disclose the joke). When the lines get crossed, it may be confusing for victims, perpetrators, and bystanders, who may not think of the cyberstalking behaviors as anything more than an obnoxious prank. Furthermore, while cyberstalking seems to be given a wide berth in the college context, the proximity of students in a given community that shares communication systems, food plans, and a workplace can create convenient conditions for cyberstalkers to know detailed information about their victims and therefore incite more fear. In these cases, the victim can feel at odds with the campus culture, and even law enforcement, who may treat the cyberstalking behaviors as less serious than the terrorizing threat experienced by the victim.

All of these potential challenges point to the need for increased education about the crime of cyberstalking and about strategies for preventing and responding to cyberstalking victimization. Faculty, staff, and peer educators should incorporate education about cyberstalking in their courses and outreach programs and in their own professional development training. Students and all university community members should be informed not only about what constitutes cyberstalking and the potential negative effects on victims, but also how best to prevent/respond to cyberstalking victimization (e.g., limiting disclosures of personal information and decreasing online/electronic accessibility, knowing not to engage the cyberstalker in any way). Ideally, these tips would be discussed in the context of conversations about relational communication (e.g., identifying online and offline relationship-seeking behaviors that “cross the line”), sexual harassment, relationship violence/stalking, and violence against women. Campus and community cyberstalking/stalking prevention and response resources should be well-advertised and accessible online. Campus public safety and judicial officers, in particular, should receive training in assessing psychological as well as physical threat/harm to victims and the technological expertise of officers tasked with cyberstalking cases should be a priority.

Policy and Advocacy

Policies addressing cyberstalking victimization are needed at campus, state, and federal levels. Campuses should develop cyberstalking/stalking policies as part of their student codes of conduct, and make a commitment to enforcing these codes. In addition, universities as well as all community and government agencies should ensure that their communication, technology, and confidentiality policies and systems are designed to

provide the maximum protection for victims and their personal information (Southworth et al., 2007). At the state and federal levels, there is a need for clarification and consistency in cyberstalking laws; legislation must be evolving continually to keep up with new manifestations of cybercrime. While new laws are being passed in most jurisdictions to address the unique criminal realities of cyberstalking, most of the laws carry only misdemeanor charges and thus cyberstalkers are unlikely to experience any real deterrent. (An exception to this is when the cyberstalking crosses state lines; in these cases, stalkers can be charged with federal crimes, providing a cyberstalking victim with far more legal power than a civil protective order, which is very difficult to administer and enforce across state lines.) In addition, while the “hard evidence” of written email or I-M threats often provides victims with more concrete proof than related crimes of sexual harassment and relationship violence, where victim testimony is simply countered with the contradictory testimony of the defendant, the view of cyberstalking as a mere “paper crime” can work against affording these cases proper time and resources. Laws that provide appropriate levels of discipline for cyberstalkers will provide an important deterrent against this crime.

A key form of advocacy at the local level for university staff, faculty, and students is serving on interdisciplinary campus and community taskforces dedicated to preventing crimes of interpersonal violence. Advocacy at the state or federal levels may involve participation in national research and interventions studies about cyberstalking victimization, or lobbying for laws that address the needs of victims. Clinicians and educators can contribute critically important information to policy-makers about the contexts for cyberstalking violence, its impact on victims, and the need for effective laws

and adequate funding for a range of victim services on campuses and in the broader community. In all of these advocacy efforts, it is critically important that the voices of victims are at or not far from the table where clinical, educational, judicial, and policy interventions are discussed and implemented.

Conclusion

In conclusion, the current study sought to contribute some of the first empirical data on the crime of cyberstalking, particularly within the context of university students' experiences. The study documented the negative impact of cyberstalking victimization and explored the role of coping as well as other key predictor, moderating, and mediating variables in relation to cyberstalking victimization. It revealed a number of important areas for future research, clinical and educational practice, and policy/advocacy interventions. As demonstrated throughout this paper, the intersection of psychology, technology, and victimization provides a complex and dynamic space in which to consider issues such as psychological and academic vulnerability and resilience, gender and sexual orientation, and threat perception. It is hoped that this work will inspire increased attention to these important topics and to the needs of cyberstalking victims on our university campuses, and in our local, national, and international cyber- and offline communities.

Appendix A

Demographic Form

(ON THE TOP OF EACH PAGE OF THE ONLINE SURVEY, A BAR INDICATED WHAT PERCENTAGE OF THE SURVEY HAD BEEN COMPLETED.)

Please provide the following demographic information about yourself.

Age _____

What is your race/ethnicity? (Check all that apply.)

- African American/Caribbean/Black
 - Asian American/ Pacific Islander
 - South Asian/Indian/Pakistani
 - European-American/White
 - Middle-Eastern/Arab
 - Hispanic/Latin American *(mistakenly not included on online survey)
 - Native American/Native Alaskan
 - Biracial/Multiracial/Other (please specify)
- _____

Sex/Gender

- Female
- Male
- Other

Sexual Orientation

- Heterosexual
- Gay/Lesbian
- Bisexual
- Other

Current Relationship Status (Check all that apply.)

- Not Dating
- Occasionally Dating
- Dating Exclusively
- Married/Committed Partner
- Separated/Divorced
- Other (please specify) _____

Academic Year/Status

- First- year Undergraduate
- Sophomore
- Junior
- Senior
- Fifth-year or beyond Undergraduate
- Graduate Student (including Master's, Doctoral, Law, or Medical degrees)

Type of College/University You Attend:

- Private Institution
- Public/State Institution

Type of College/University You Attend:

- 2-Year Undergraduate College/Community College
- 4-Year Primarily Undergraduate Institution
- 4-Year Undergraduate and Graduate institution

Size of your College/University

- Small (up to 5,000 students)
- Medium (5,000-10,000 students)
- Large (Over 10,000 students)

US College/University Location:

- New England
- Mid-Atlantic
- Southeast
- Midwest
- Northwest
- Southwest

How Did You Learn About This Survey?

- Another college/university student
- Staff/faculty member
- Online listserv
- Online community (e.g., Facebook, MySpace)
- Online experiment-for-credit
- Other (please specify) _____

Appendix B

Cyberstalking Victimization Questionnaire

In cyberstalking, an individual repeatedly pursues or monitors another person through a computer, cell phone, or another type of technology IN A WAY OR TO A DEGREE THAT CAUSES THE TARGETED PERSON TO FEEL THREATENED OR AFRAID.

The stalker can be a stranger, a romantic partner, a work/school colleague, an online friend, etc.

(Please respond YES or NO to every item):

Has anyone repeatedly pursued or monitored you through the use of technology by...

- sending poetry, song lyrics, e-cards, messages implying a more intimate relationship than you had with the person
- sending excessively needy or demanding messages
- sending messages that inappropriately shared information about the sender's life, body, family, hobbies, sexual experiences, etc.
- spreading rumors or embarrassing information about you via e-mail, I-M, text message, online profiles, blogs, etc.
- posting or distributing pictures of you without your consent
- sending pornographic/obscene images or messages that seemed TARGETED AT YOU (i.e., NOT SPAM)
- sending messages that directly or indirectly threatened to harm you, your friends, family, pets, possessions, etc.
- sending sexually harassing messages that commented on your appearance, described hypothetical sexual acts between you, made sexually demeaning remarks, etc.
- sending threatening pictures or images
- obtaining and/or exposing your private information without permission
- monitoring your online profiles, away messages, etc.
- altering or taking over your electronic identity or persona
- falsely representing him/herself online or via another electronic medium
- enlisting others electronically to harass you online or offline
- attempting to disable your computer, cell phone, etc.
- "bugging" your car, home, or office
- tracking your whereabouts using a global positioning system (GPS) device in a cell phone, a car, etc.

According to the definition of cyberstalking provided, have you been cyberstalked anytime during your lifetime?

- **you have been repeatedly pursued or monitored by another person/persons**
- **through a computer, cell phone, or another type of technology**
- **in a way or to a degree that caused you to feel THREATENED OR AFRAID.**
 - I have been cyberstalked. (GO TO REST OF SURVEY)
 - I have experienced some of these behaviors but did not feel threatened or afraid. (GO TO REST OF SURVEY)
 - I have NOT been cyberstalked. (THANKS FOR YOUR TIME--DIRECT TO RESOURCES PAGE)

Please describe your WORST CYBERSTALKING EXPERIENCE in the space below. Provide as much detail as you can about ALL of the specific behaviors directed toward you and how this experience affected you.

(STALKING/HARASSMENT THREAT PERCEPTION SCALE)

Thinking about your worst cyberstalking experience described above, rate the degree to which these behaviors:

Not at all							Extremely
0	1	2	3	4	5	6	

1. seriously annoyed you
2. flattered you
3. amused you or made you curious
4. caused you substantial emotional distress
5. caused you to feel afraid or threatened
6. caused you to fear for your own safety or the safety of your friends, family, pets, or possessions
7. included a specific threat (re: harming you or someone/something you care about)

Keeping in mind your worst cyberstalking experience that you described above, please answer the following questions:

During what time period in your life did the cyberstalking occur?

- grade school/middle school
- high school
- post-high school
- college
- post-college
- graduate school

What is the sex/gender of the person who pursued you?

- don't know
- female
- male
- other

How did this pursuer obtain your contact information?

- don't know
- from me
- mutual friend/acquaintance
- found the information online
 - please specify WHERE online you think your pursuer obtained information about you:

- other (please specify)_____

Approximately how long did the behaviors continue?

Years _____
Months _____
Days _____

How frequent were the behaviors? (Please enter a number in ONLY ONE box—the unit of measure that makes most sense for your experience.)

Times per day: _____
Times per week: _____
Times per month: _____

What type of relationship did you have with this person immediately prior to the time of the pursuit behaviors? (Check the best answer)

- unknown
- stranger
- online acquaintance/buddy only
- acquaintance
- work colleague
- service provider-customer relationship
- friend
- family member/relative
- “casually dating” relationship
- “seriously dating” relationship
- spouse/committed partner
- estranged, separated, or ex-spouse/committed partner
- Other (please specify) _____

How long did the relationship (that you identified above) last before the person’s pursuit of you became unwanted?

years _____

months _____

days _____

Do you have reason to believe that this person has cyberstalked others before or after you?

- yes
- no
- I don’t know

What was the outcome of your cyberstalking experience? That is, the behaviors:

- stopped
- lessened
- increased
- are ongoing
- other (please specify) _____

(IF ANSWERED “STOPPED”):

Why do you think the person ultimately stopped pursuing you?

Appendix C

Impact of Event Scale-Revised (IES-R)

The following is a list of difficulties people sometimes have after stressful life events.

KEEPING IN MIND YOUR WORST CYBERSTALKING EXPERIENCE THAT YOU WROTE ABOUT ABOVE...

Please read each item and then indicate how distressing each difficulty was for you in the time period (approximately 6 months) immediately following that experience.

How much were you distressed or bothered by the following difficulties?

(0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, 4 = extremely)

1. Any reminder brought back feelings about it.
2. I had trouble staying asleep.
3. Other things kept making me think about it.
4. I felt irritable and angry.
5. I avoided letting myself get upset when I thought about it or was reminded of it.
6. I thought about it when I didn't mean to.
7. I felt as if it hadn't happened or wasn't real.
8. I stayed away from reminders about it.
9. Pictures about it popped into my mind.
10. I was jumpy and easily startled.
11. I tried not to think about it.
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.
13. My feelings about it were kind of numb.
14. I found myself acting or feeling like I was back at that time.
15. I had trouble falling asleep.
16. I had waves of strong feelings about it.
17. I tried to remove it from my memory.
18. I had trouble concentrating.
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.
20. I had dreams about it.
21. I felt watchful and on guard.
22. I tried not to talk about it.

Appendix D

Financial Impact Item

Did you suffer any financial losses as a result of your cyberstalking experience (e.g., had to purchase a new cell phone plan, computer software, etc.)?

- No
- Yes (please describe) _____

Appendix E

Impact on Career and Educational Functioning (ICE)

KEEPING IN MIND YOUR WORST CYBERSTALKING EXPERIENCE THAT YOU WROTE ABOUT ABOVE, please indicate the degree to which you experienced each of the following in the time period (approximately 6 months) after that experience.

0 = Not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, 4 = extremely

1. Feelings I had about my education changed.
2. My ability to work with others in school worsened.
3. I felt more depressed/apathetic about school.
4. I felt more anxious/panicky about school.
5. I felt more angry/hostile about school.
6. The quality of my schoolwork decreased.
7. The quality of my schoolwork increased.
8. The time spent distracted from my schoolwork increased.
9. The time I spent on my schoolwork increased.
10. My expectations of meeting future academic/career goals decreased.
11. I contemplated changing majors/career goals.
12. I changed majors/career goals.
13. I contemplated transferring to another school.
14. I transferred to another school.
15. My grades decreased.
16. I took incompletes in one or more courses.
17. I dropped or withdrew from courses.

Additional or clarifying comments about the impact of your cyberstalking experience on your academic functioning or career goals (optional):

Appendix F

Brief Resilient Coping Scale

The following items ask about how you typically approach difficult situations that you encounter in life.

Rate how well the following statements describe your behavior, from “does not describe me at all” to “describes me very well.”

does not
describe me at all

describes me
very well

0 -----1-----2-----3-----4

1. I actively look for ways to replace the losses I encounter in life.
2. I believe that I can grow in positive ways by dealing with difficult situations.
3. I look for creative ways to alter difficult situations.
4. Regardless of what happens to me, I believe I can control my reaction to it.

Appendix G

Coping Responses Measure

The following items represent several types of responses that you may have used in an effort to cope with the cyberstalking experience you wrote about above.

For each response listed below, indicate what effect your coping strategy had on the pursuit behaviors. (If you did not use the strategy, indicate that by checking the first bubble.)

THIS STRATEGY...

1 = I did not use

2 = decreased or stopped the behaviors

3 = increased the behaviors

4 = had no effect on the behaviors

1. ignored or avoided the pursuit behaviors
2. minimized or denied the problem
3. negotiated the definition of your relationship with your pursuer (e.g., suggested that you should just be friends, said that you would get back together)
4. behaved more cautiously
5. changed my address or daily schedule
6. sought information/resources on the Web
7. decreased my use of the Internet or specific Internet sites, decreased my cell phone use, etc.
8. limited disclosure of my personal information on the Internet (e.g., adjusted privacy settings, removed profile, deleted info from my e-mail signature or profile)
9. blocked my electronic accessibility (e.g., caller ID/blocking, blocked or changed screen names or e-mail address, contacted Internet service provider to block certain contacts, enhanced firewalls)
10. confronted my pursuer in writing (e.g., e-mail, I-M, text message)
11. confronted my pursuer in person/on the phone
12. issued warnings/threats (e.g., threatened reporting to police or responding with violence if pursuit continued)
13. built a legal case (e.g., kept log of behaviors, saved messages from pursuer)
14. met with police to do a threat assessment
15. retaliated using electronic methods (e.g., spamming pursuer's e-mail, sending viruses, sabotaging pursuer's website)

Use this space to describe other strategies used that were not listed above OR to further explain your responses.

(If you list additional strategies, please indicate whether these were effective in decreasing or stopping the pursuit behaviors.)

Appendix H

Reporting Measure

Whom did you tell about your experience of being cyberstalked? (Check all that apply.)

- No one
- Friend
- Roommate/Housemate
- Boyfriend/Girlfriend/Partner/Spouse
- Family Member
- Online Support Organization (e.g. Cyberstalking Prevention site)
- Online Friend/Chatroom
- Victim Advocate
- Crisis Hotline
- Counselor/Therapist/Psychiatrist
- Pastoral/Spiritual Counselor
- Doctor/Health Center Staff (non-mental health staff)
- Residence Life Staff /House Director
- Academic Advisor/Professor/TA/Department Staff
- Coach
- Work Supervisor
- Other (please specify) _____

If you told someone, were you satisfied with the response you received from this person/these persons? (If you told more than one person, please comment on the responses you received from the different persons.)

Did you FORMALLY REPORT or FILE A COMPLAINT with any of the following regarding your experience of being pursued? (Check all that apply.)

- I did not formally report or file a complaint
- Victim Advocate
- Police/Public Safety Department
- Courthouse/Commissioner (e.g., for a protective or restraining order)
- Judicial Affairs/Office of Student Conduct
- Sexual Harassment Compliance Officer/Human Relations Office
- Office of Information Technology/Campus Technology Ethics Office
- Residence Life Staff/House Director
- Legal Aid Office
- Personal Lawyer
- Internet Service Provider, E-mail Provider, Server
- Other (please specify) _____

What contributed to your decision not to report your experience?

- The problem was not serious enough.
- I ignored it.
- I handled it myself.
- I did not know to whom to report it.
- Other (please specify) _____

Were you satisfied with the responses you received from these offices/organizations?
(You can check more than one box.)

- Yes
- No

If you reported to more than one office or had different experiences with the same office, describe how satisfied you were with each of your reporting experiences.

Did your report/complaint result in any campus disciplinary action for the individual who was pursuing you?

- Yes
- No

Please explain further if you wish to:

Did your report/complaint result in an arrest, prosecution, conviction, or sentence for the individual who was pursuing you?

- Yes
- No
- Case ongoing

Please explain further if you wish to:

Appendix I

Survey Invitation E-mails

National Listservs Advertisement – Earlier Version

Subject Line: CYBERSTALKING VICTIMIZATION IN UNIVERSITY STUDENTS: A NATIONAL SURVEY

PLEASE HELP US REACH UNIVERSITY STUDENTS WHO HAVE BEEN STALKED ONLINE or through another type of technology (text messaging, tracking device, etc.)?

Copy the text and link below and forward to potential student participants and other listservs/local agencies who may have contact with university student victims of technology-aided stalking.

If at all possible, please email me (nhensler@psyc.umd.edu) with an APPROXIMATE NUMBER of students/individuals to whom you advertised the survey. This will assist in obtaining a return rate, a methodological challenge with online surveys. Thanks!

ARE YOU A UNIVERSITY STUDENT WHO HAS BEEN STALKED ONLINE or through another type of technology (text messaging, tracking device, etc.)?

Complete a brief, anonymous online survey and you could WIN \$50 IN CASH or iTUNES MUSIC!

Survey participants should be 18 years of age and currently enrolled U.S. undergraduates or graduate/medical/law students who have experienced cyberstalking.

CYBERSTALKING STUDY LINK (Students: click here or copy into your browser): http://www.surveymonkey.com/s.aspx?sm=GDrMgI0bwvi1_2f8qkOIhDUQ_3d_3d

For more information or to request flyers regarding this research study: contact Nancy Hensler-McGinnis, M.A. (nhensler@psyc.umd.edu), former campus Victim Advocate and current counseling psychology doctoral student from U.Maryland. This survey has been approved by the U. Maryland, College Park Institutional Review Board (Application #07-0409).

Survey Invitation E-mails

National Listservs Advertisement – Later Version

Subject Line: NATIONAL CYBERSTALKING VICTIMIZATION
SURVEY—WIN \$50! PLEASE FORWARD TO
UNIVERSITY STUDENTS

ARE YOU A UNIVERSITY STUDENT WHO HAS BEEN STALKED
ONLINE or through another type of technology (text messaging, tracking
device, etc.)?

Complete a brief, anonymous online survey and you could WIN \$50 IN
CASH or iTUNES MUSIC!

Survey participants should be at least 18 years of age and currently enrolled U.S.
undergraduates or graduate/medical/law students who have experienced cyberstalking.

If you are not a university student, please avoid clicking on the link, as it affects the
return rate for the sample. Thanks!

**CYBERSTALKING STUDY LINK (Students: click here or copy into
your browser):**

http://www.surveymonkey.com/s.aspx?sm=GDrMgI0bwvi1_2f8qkOIhDUQ_3d_3d

For more information or to request a copy of the survey, contact:

Nancy Hensler-McGinnis, M.A. (nhensler@psyc.umd.edu), former campus Victim
Advocate and current counseling psychology doctoral student from U.Maryland. This
survey has been approved by the U. Maryland, College Park Institutional Review Board
(Application #07-0409).

Survey Invitation E-mails

University of Maryland Listservs

Subject Line: NATIONAL CYBERSTALKING SURVEY—WIN \$50:
PLEASE FORWARD

ARE YOU A UNIVERSITY STUDENT WHO HAS BEEN STALKED
ONLINE or through another type of technology (text messaging, tracking
device, etc.)?

Complete a brief, anonymous online survey and you could WIN \$50 IN
CASH or iTUNES MUSIC!

Survey participants should be at least 18 years of age and currently enrolled
U.S. undergraduates or graduate/medical/law students who have experienced
cyberstalking.

If you are not a university student, please avoid clicking on the link, as it affects the
return rate for the sample. Thanks!

CYBERSTALKING STUDY LINK FOR U.MARYLAND, COLLEGE
PARK STUDENTS (Click here or copy into your browser):

http://www.surveymonkey.com/s.aspx?sm=2_2fkEDfjNe5KpSTNCpKMu8g_3d_3d

CYBERSTALKING STUDY LINK FOR STUDENTS ATTENDING ANY
OTHER UNIVERSITY (Click here or copy into your browser):

http://www.surveymonkey.com/s.aspx?sm=_2bdPW4nnxR6Msp1X_2fUjXOlG_3d_3d

[Both surveys are identical and completely anonymous; the separate link for
UMCP simply will allow us to gain general information about how
cyberstalking on this campus is similar to or different from cyberstalking on
other campuses nationally.]

For more information or to request a copy of this survey: contact Nancy Hensler-
McGinnis, M.A. (nhensler@psyc.umd.edu), former campus Victim Advocate and current
counseling psychology doctoral student from U.Maryland. This survey has been
approved by the U. Maryland, College Park Institutional Review Board (Application #07-
0409).

Appendix J

Resources Page

Resources: Cyberstalking Prevention and Response**National Resources**
~~~~~

- National Center for Victims of Crime: Stalking Resource Center  
<http://www.ncvc.org/src> (800) FYI-CALL
- National Network to End Domestic Violence: Safety Net Project  
<http://www.nnedv.org/internet-safety.php> (800) 799-SAFE
- Online organizations:
  - CyberAngels <http://www.cyberangels.org/stalking.html>
  - Working to Halt Online Abuse <http://www.haltabuse.org>
- Local Police (911)
- Your Internet Service Provider (ISP), E-mail Provider, Server

**Campus Resources**  
~~~~~

Search your college/university's website or phone directory for any of the following offices that can be of help to you:

- Victim Advocate Office
- Campus Police/Public Safety Office
- Office of Student Conduct/Judicial Affairs
- Sexual Harassment Compliance Officer
- Office of Information Technology/Campus Technology Ethics Office
- Counseling Center or Health Center Mental Health Clinic
- Residence Life Office
- Legal Aid Office
- Women's Center

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