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Explaining Victim Impact from Cyber Abuse: An Exploratory Mixed Methods Analysis

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ABSTRACT

Crime and deviance can have a significant and long-lasting effect on victims. While the literature on victim impact from traditional types of crime like robbery or assault is well established, much smaller scholarship examines the impact of online forms of deviance with only a handful of studies focusing on the experiences of adult victims. The current paper analyses the data from a sample of the U.S. adults (*N*= 746) using mixed methods to examine the *perceived impact* from different types of cyber abuse. A thematic analysis of open-ended responses identified five main types of victim impact: psychological, emotional, social, financial and positive. We also found that females, victims, who were abused by someone they knew, and who experienced multiple methods of abuse tended to experience higher impact. Besides, some methods of abuse appeared to affect victims more than others. Findings from this study contribute to our understanding of cyber abuse as a type of deviant behavior and help inform policy responses to the needs of cyber abuse victims.

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Introduction

The advent of the Internet has revolutionized communication; in almost everything we do, be it work, shop, learn or entertain, we use the Internet. Increasingly, it is also being used as a medium for expressing anger, frustration, and the desire to control or hurt others. *Cyber abuse* (an umbrella term for cyberstalking and cyberharassment) is now a very common social problem (Duggan 2017; Reyns, Henson, and Fisher 2011; Vakhitova et al. 2019). It can take many different forms, including persistent messaging or emailing in a way that makes the victim feel intimidated or scared, impersonating or spreading rumors about someone, posting embarrassing, fake or intimate videos or photos, and harassing someone on social networking sites (Bocij 2006; Duggan 2014; Kraft and Wang 2010).

While prevalence estimates vary, research is consistent that large proportions of populations of industrialized countries like Canada, Australia, Taiwan, or Hong Kong have experienced cyber abuse as victims (Hokoda, Lu, and Angeles 2006; Statistics Canada 2016; Vakhitova and Reynald 2014; Wong, Chan, and Cheng 2014). In the USA, one study estimated the lifetime prevalence of cyber abuse victimization among the adult population to be around 40% (Duggan 2017).

The existing research suggests, similar to the traditional offline forms of crime and deviance, cyber abuse can be an unpleasant and even traumatic experience (Dinisman and Moroz 2017; Dreßing et al. 2014; Fisher, Cullen, and Turner 2000; Fissel 2018; Fissel and Reyns 2019; Nobles et al. 2014; Parsons-Pollard and Moriarty 2009; Shapland and Hall 2007; Tjaden and Thoennes 2000). However, until recently, most of the

research that examined such forms of technology-facilitated interpersonal violence as cyber abuse has focused almost exclusively on the experiences of adolescents and young adults[1]. However, online forms of interpersonal violence are increasingly becoming a fact of life for adults of all age groups as well. A study by Pew Research Center (USA) established that in 2017 nearly half of 30- to 49-year olds and 22% of those aged 50 and older have experienced some form of cyber abuse (Duggan 2017). Worryingly, for both groups, the proportions of victims were higher in 2017 compared with the earlier survey of 2014. This suggests the need for research focusing on victimization experiences of adults, as we cannot be sure their experiences would be identical to those of children and youth.

The improved understanding of the predictors and types of the perceived victim impact from cyber abuse is critically important for informing policy responses to the needs of victims. Long term consequences of cyber abuse in the adult working population have been shown to relate to physical health issues and poor job satisfaction (Farley et al. 2015). By establishing the risk and protective factors associated with the increased level of victim impact we might be able to identify the high-risk groups within the population and develop tailored victim support and crime prevention programs. With this in mind, this study aims to contribute to the knowledge base by developing a typology of victim impact from cyber abuse, at least as perceived by victims, and identifying factors associated with the increased victim impact.

Literature review

The terms *cyberstalking* and *cyberharassment* are used to indicate behaviors that involve repeated and overtime use of technology to scare, intimidate, embarrass or monitor adult victims. Due to the overlapping nature of the behaviors involved in stalking or harassment, the two terms are often used interchangeably. For example, Duggan (2017) measured *online harassment* using six distinct behaviors: offensive name-calling, purposeful embarrassment, physical threats, harassment over a sustained period of time, sexual harassment and, *stalking*. Conversely, Reyns, Henson, and Fisher (2011: 1156) identified individuals who were "(a) repeatedly contacted online after asking the person to stop, (b) repeatedly *harassed* online, (c) the recipient of repeated and unwanted sexual advances, or (d) repeatedly threatened with violence while online." as victims of cyberstalking, and Bocij and McFarlane (2003: 205) defined cyberstalking as "the use of ICT in order to harass individuals". Some research conceptualized the difference between cyberstalking and cyberharassment through a degree of fear experienced by the victim. For example, the National Crime Victimization Survey stalking supplement defines victims of cyberharassment as those who experienced "behaviours associated with stalking but neither reported feeling fear as a result of such conduct nor experienced actions that would cause a reasonable person to feel fear" (Baum et al. 2009: 1). Because it is often not possible to cleanly separate behaviors that constitute stalking and harassment, we review the existing research on victim impact from both cyberstalking and cyberharassment.

Most of what we know about cyber abuse reflects the experiences of adolescents and young people. In a systematic review of the research on technology-facilitated abuse of adults, the majority of studies (71 out of 90) analyzed samples of college students (Jenaro, Flores, and Frias 2018), and the rest (n= 19) were based on samples drawn from specific groups of interest, mostly professionals, e.g., business personnel, white-collar workers, politicians, college teachers, etc. The trend of relying on college student samples is also evident in the study of the *impact* from cyber abuse (see, for example, Bennett et al. 2011; Mishna et al. 2018; Schenk and Fremouw 2012). This leaves a considerable gap in our understanding of the cyber abuse victimization experiences of mature adults.

The research suggests that victims of cyber abuse can be affected in several different ways with psychological and health-related consequences being the most commonly cited. Dreßing et al. (2014: 61) examined the impact of cyberstalking, defined as "repeat pursuit of an individual using electronic or Internet-capable devices", in a large sample of members of the German social network *StudiVZ*. A list of psychosomatic and psychological problems, based on the WHO-5 mental well-being index (Bech 2004),

was used to measure victim impact. The researchers found that victims commonly experienced some form of negative psychological or health-related outcome, including a general feeling of inner unrest, mistrust toward other people, sleep disorders, feelings of helplessness, anger, aggression, and a variety of health problems including headaches, depression, and panic attacks. Short et al. (2015) surveyed clients of Network for Surviving Stalking, a victim support service. The researchers found that experiencing cyberstalking, defined as "a pattern of intrusions and harassment upon a person in a manner which would cause a reasonable person anxiety or fear" (Short et al. 2015), was associated with many serious mental health issues, including suicidal thoughts, fear, anger, depression, and symptoms of post-traumatic stress. Worsley et al. (2016) qualitatively analyzed one hundred victim narratives describing their experiences with cyber abuse, defined as "the repeated pursuit of an individual utilising electronic means to induce fear or distress" (p. 2). The researchers specifically focused on the emotional, cognitive, and lifestyle impacts of victimization, and found anxiety and depression to be the most common ones.

Besides psychological and health-related consequences, Fissel and Reyns (2019) have found victims of cyber abuse may experience social, school-, and work-related consequences. The researcher examined how cyberstalking, defined as "repeated pursuit behaviours and fear or distress experienced by victims", affected young people aged between 18 and 25. To measure the impact, the respondents in this study were presented a list of possible outcomes associated with victimization: school, work, social and health, and were asked to indicate whether they suffered from any of them as a consequence of victimization. Fissel and Reyns (2019) found health-related consequences were the most common and the school consequences the least common (61% and 41% respectively). Due to the methodology employed in this study, it is not clear whether these specific four types of consequences represent a comprehensive typology or how common they are experienced by adults over the age of 25.

Most research suggests that the impact of cyber abuse on its victim is negative (see, for example, Fissel 2018; Nobles et al. 2014; Short et al. 2014). However, Rutter (2006) argued that exposure to significant adversity in the form of criminal victimization may lead to a positive outcome as a result of adaptation. Furthermore, Yehuda (2006) argued that resilience may develop following risk exposure, such that certain mechanisms are mobilized in response to criminal victimization. Thompson (2000), who interviewed victims of rape argued that they often focused on how they have grown from the experience. Further, McFarland and Alvaro (2000) observed that victims would sometimes see themselves as much weaker before the victimization event, even if that was not true. While a considerable criminological scholarship has examined positive outcomes of crime (resilience in the face of adversity) as it relates to offending behavior (see, for example, Murray 2010; Rumgay 2004), very little of the victimological literature, concerns the positive outcomes of victimization, especially from new technology-facilitated forms of deviance (see Walklate 2011; Dutton and Greene 2010, for the reviews of relevant research).

Research on the impact of victimization from both traditional and new technology-facilitated forms of crime and deviance suggests that cyber abuse affects different people differently. Some victims are so traumatized they can have personal and mental health problems that upset their daily existence. For many though, the effect appears to be only minor while others are not affected at all. In the study of online harassment by Pew Research Center (Duggan 2017), 25% of participants said they were extremely or very upset by the incident, while 26% were only upset a little and a further 23% were not upset at all.

Previous research identified several socio-demographic characteristics of victims associated with higher impact from interpersonal crimes such as stalking and harassment. Female gender and preexisting offender-victim relationship were found to be consistent predictors of higher victim impact (Baum et al. 2009; Johnson and Kercher 2009; Korkodeilou 2017; Sheridan and Lyndon 2012). Dreßing et al. (2014) found that a prior intimate partner relationship with the offender and the gender of the victim (female) was a factor in cyberstalking victimization. In the study by Fissel and Reyns (2019), incidents that lasted longer or included more different types of online pursuit behaviors, or involved offline stalking victimization were more likely

to be associated with a negative victim impact. Further, in line with previous research on offline stalking, the prior relationship between the stalker and his/her victim was found to a significant predictor of negative victim impact, but in contrast, the gender of the victim was not predictive of victim impact.

Notably, the research measuring victim impact from cyber abuse has treated it as one uniform type of behavior (see, for example, Fissel and Reyns 2019; Sheridan and Grant 2007). However, as mentioned in the Introduction section, cyber abuse can take a variety of very different forms; different forms of cyber deviance may likely be associated with different victim impact. While there is some scholarship comparing the effects of online and offline abuse (see, for example, Reyns and Englebrecht 2010), the effects of different types of cyber abuse on victims remain mostly unknown.

The current study

Previous research has laid a solid foundation for understanding the negative psychological and mental health effects of cyber abuse on adolescents and young people. However, we know much less about how cyber abuse affects adults in general. To contribute to the existing literature, the current study will focus on the three aspects of the perceived victim impact–its types, magnitude, and predictors – and will answer the following three research questions:

Research Question 1: What types of perceived impact do victims of cyber abuse experience?

Research Question 2: Are different types of victim impact associated with the different perceived magnitude of impact?

Research Question 3: Do different methods of cyber abuse and/or the number of experienced methods of cyber abuse explain the variable magnitude of the perceived victim impact?

Data and methods

To answer our research questions, we analyzed the data from a sample of U.S. adults using mixed methods of analysis. The data was collected using an online survey based on Qualtrics Online Platform. The participants were asked questions about their experiences with cyber abuse victimization, the perceived impact cyber abuse had on them, and some other relevant data, including demographic characteristics.[2] All questions were developed specifically for this study. The participants were offered a small monetary compensation (US$0.35) for completing the survey, commensurate with the average amount of time it took (6 minutes on average). Research suggests this approach improves response quality in Mechanical Turk surveys (Peer, Vosgerau, and Acquisti 2014).

Our survey participants were recruited from an online opt-in panel Mechanical Turk (MTurk). MTurk samples, like the one we've collected, allow accessing a large and fairly diverse pool of potential respondents and have been extensively used in academic research, including in the field of criminology and criminal justice (see, for example, Fissel 2018; Vakhitova et al. 2019). Research shows that non-probability samples can be useful for evaluating theories (Broidy 2001; Hay 2001; Stets and Carter 2012; Van Gelder and De Vries 2012). Whilst we cannot assume that our sample is representative of all U.S. adults (our target population), we can still estimate the explanatory power of various factors that may affect victims' perceptions of the impact of cyber abuse.

The data collection took place between 19th of May 2017 and 19th of September 2017. In total, 1,623 respondents began the survey, and 1,463, or slightly over 90%, completed the survey. Out of the total number of respondents, around half (N= 746; 51%) reported experiencing some form of cyber abuse. Only responses from those individuals were included in the final sample analyzed herein.

Participants

Given that the focus of this study is on cyber abuse that affects adults, we limited participation in our study to residents of the United States of America who were at least 18 years old at the time of participating in our study. On average, our respondents were quite young (μ = 31.2 *years; SD* = 20.6) and predominantly female (*N*= 405, 54%), white (*N*= 532, 71%) and employed (*N*= 603, 81%). The most common method of abuse experienced by participants was direct abusive messages (*N*= 506, 67%), and the least common was impersonating the victim online (*N*= 130, 17%). While most victims experienced only one method of abuse in one incident, the average for the sample was 1.7 methods per victim per incident.

Concepts and measurements

In this paper, we distinguish *cyber abuse*, which affects adult victims from *cyberbullying*, which targets child victims under the age of 18. Furthermore, we treat cyber abuse as a broad deviance category. However, within this broad category, we distinguish behaviors that are sufficiently unique and different from each other. For example, we distinguish between direct abusive messages and indirect abuse posted on public forums as these two behaviors are clearly different in terms of the method of delivery. These different types of abuse are likely to be perceived as having different impacts.

To identify victims of cyber abuse among those who accepted our invitation to participate in the survey, we first asked all our respondents whether they experienced any form of cyber abuse directed at them personally. To ensure that the respondents were clear about the types of behaviors we were interested in, we provided several examples of different forms that cyber abuse can take. The following is the text of the question used to identify victims of cyber abuse: "Have you ever experienced any form of cyber abuse directed at your personally? By cyber abuse, we mean the use of the Internet or other technological means (cell phones, gaming devices, etc.) to stalk or harass. It can be in the form of e-mails, texts (SMS), posts on blogs, online forums and social media pages of a persistent, annoying, alarming or threatening nature; monitoring your daily activities using social media or specialized software; posting information about your online (photos, documents, videos) without your consent or distribution such information to others via e-mail, SMS or other technological means; impersonating you online or through e-mail or SMS; subscribing you online to unwanted services, products, activities, etc. or other similar behaviors."

Respondents who reported experiencing cyber abuse were then asked to think about the most recent or most memorable incident they experienced, and to select one or more specific behaviors they experienced *within this one incident* from the list: 1) you received a text message, e-mail or a private message via social media addressed to you personally; 2) someone posted derogatory, embarrassing information (documents, photos, videos, etc.) about you on the Internet or distributed it to others via e-mail, text (SMS) or other technology or someone created a website or a social media page containing derogatory or em- barrassing information about you; 3) you were subscribed to unwanted services, products, activities and you only found out about the subscription after you started to receive the services or products or were invited to participate in the activities; 4) someone, pretending to be you, sent e-mails or text messages or private messages on social media pages to your family, friends, coworkers, or other third parties; 5) your daily activities been monitored by someone via social media or tracking software. The answers to these questions were coded as a variable "*methods of abuse"*. We also calculated *the number of different methods of abuse* experienced within one incident.

To measure victim impact, we asked our respondents the following two questions: 1) How affected were you by this incident (psychologically, emotionally, financially, or otherwise)? and 2) Please tell us in your own words about the effect this incident had on your life. To answer the first question, the respondents picked a position on a slider anywhere between 0.0 and 2.0 where 0.0 meant the respondent was not at all affected by the abuse, 1 – somewhat affected and 2.0 – profoundly affected. The respondents were then asked to describe in their own words the impact that the cyber abuse incident had on their lives.

Further, to assess the nature of the offender-victim relationship before the abuse, we asked our respondents who were the person(s) involved in the incident in relation to the respondent and provided the following possible responses: a) close or extended family; a romantic partner or spouse; c) romantic ex-partner or ex-spouse; d) business or work connection (coworker, colleague, employer, employee or business associate); e) education connection (college or university professor or student, academic advisor or supervisor, tutor, teacher, coach or trainer); f) friend or acquaintance; g) social media or online gaming connection; h) someone I met through sports, social clubs or committees, volunteer organizations etc.; i) a stranger (someone I definitely do not know); j) I am not sure of the real identity of the person(s) involved, but I suspect, it is someone I know; k) a mixed group of people; l) other. Please specify. We then coded responses as follows: a – h and j – 1 – prior relationship and i – o – no prior relationship. Responses k and l were coded accordingly and following the same principles.

To control for the potential effect of demographic characteristics on the perceived magnitude of victim impact, we have included the following demographic variables as controls in both our models: *age* (in years), *gender* (female = 1), *race/ethnicity* (white = 1), and *employment status* (employed = 1). To ensure that we measure the demographic characteristics around the time of the cyber abuse incident, we asked our respondent–victims to give us the information in the context of the time of the incident they reported. For example, "Around the time of the incident, what was your age?"

Analytic strategies

To answer Research Question 1 we have conducted a qualitative thematic analysis of open-ended responses of victims about the impact cyber abuse had on their lives. To answer Research Question 2, we plotted the relationship between the perceived victim impact and types of victim impact, and the number of types of victim impact. To answer Research Question 3, we first produced a correlation matrix for all variables of interest and plotted the relationships between the perceived victim impact and gender, offender-victim relationship, methods of abuse and number of methods of abuse experienced by the victim. This was followed by modeling using linear regression with Bayesian variable selection and stochastic search algorithm implemented in AutoStat®.

Thematic analysis

The open-ended responses of victims describing the impact of cyber abuse were analyzed for the presence of common themes using thematic analysis, a type of qualitative research aiming to identify, examine and record patterns (or themes) within data. Using this approach meant we were not restricted to the types of abuse previously identified in literature but were able to explore them in a more ecologically valid manner. An approach similar to that recommended by Braun and Clarke (2006) was followed, comprising the following steps: 1) carefully reading the responses to familiarize ourselves with the data, 2) generating and applying the initial codes by documenting the apparent patterns, 3) combining the initial codes into overarching themes, 4) reviewing the original interview data to make sure the identified themes adequately represent the data, 5) defining the themes, and finally 6) selecting themes relevant to the research questions and most representative of the data to be included in this paper and checking whether these selected themes are representative of the data as a whole. The coding was performed using NVivo (a qualitative data analysis software package by QSR International). Two independent researchers were involved in coding the themes with a high degree of agreement between them with Krippendorff's α coefficient of inter-rater agreement of 0.78 (substantial) (Krippendorff 2013). When the coders disagreed, they talked to each other to come up with a mutually acceptable decision on how to code a case.

Linear regression with Bayesian variable selection

To explain the victim impact from cyber abuse (dependent variable), we modeled it using linear regression with Bayesian variable selection and stochastic search algorithm implemented in AutoStat®. The following regressors were included in the model: methods of abuse experienced by the victim; the number of methods (1 to 5), offender-victim relationship and demographic characteristics (age, gender, race and employment status).

In deciding on the modeling approach, we took into consideration the exploratory nature of the study, the lack of theoretical guidance on exact model specification, and the benefits of statistical methods of variable selection identified in previous literature (see, for example, Raftery 1995; Vakhitova, Alston-Knox, and Griep 2018; Vakhitova, Reynald, and Townsley 2016). A stochastic search algorithm to determine the most likely models which include variables that can explain the outcomes while preserving good estimation performance was deemed most appropriate. These models were then used to estimate the posterior distributions of the unknown parameter effects. To estimate the models we employed AutoStat®, a software package for statistical analysis by Predictive Analytics Group (https://autostat.com.au/).

In regression, where there are k potential explanatory variables, the full model likelihood can be specified as

$$y|\beta,\ X,\ \sigma^2 \sim N\left(\beta_K X,\ \sigma^2 I\right)$$

where K= {0, 1, 2, …, k} possible regressors (K = 0 indicates intercept term).

In a Bayesian setting, the unknown parameters, β and σ require a prior distribution to be specified to estimate their respective posterior distributions, based on the MCMC samples. In this study, we employed a G-prior (spike-slab) to enable the variable selection. A schematic diagram of the G-prior spike slab is shown in Figure 4. As shown, the prior takes 2 states. During MCMC iterations where the coefficient is included in the model (as indicated by the stochastic search algorithm), the prior used in this posterior sample draw will be a G-prior, indicated as the "slab". Similarly, for iterations when the stochastic search does not include a coefficient, the prior used in the posterior draw is a point mass at zero (0), indicated by the "spike", resulting in a posterior draw of the coefficient that is exactly zero (0).

The g-prior (slab) for our β parameters is given by:

$$p(\beta|y) \sim MVN\left(0, g\sigma^2\left(X^T X\right)^{-1}\right)$$

As g increases, the prior becomes more concentrated around zero (0) and takes on a more active role in the posterior distribution specification. In this example, we set g to be equal to the sample size (the default value in AutoStat®). For more information about the stochastic search algorithm for variable selection, and this specification of the g–prior, please see Marin and Robert (2014).

Results

Descriptive characteristics of the sample

Slightly over 50% of respondents in our sample reported experiencing at least one incident of cyber abuse sometime in their lifetime (N= 746). Direct abusive messages (Method 1) were the most common type of cyber abuse and online impersonation (Method 4)–the least common–with 67 and 17% of victims respectively experiencing these types of cyber abuse. Interestingly, while media often focuses on cyber abuse incidents on the extreme side of the spectrum of victim impact (Stephens 2007), the average magnitude of perceived victim impact in our sample was 1.13 (min 0.0, max 2.0), which corresponds to a slightly higher than "somewhat affected". Table 1 provides descriptive statistics for all the variables of interest. Means and standard deviations are provided for continuous variables and percentages of the total sample for dichotomous variables.

Table 1. Descriptive statistics of the sample ($N = 746$) (Table view)

Variable	*N*	*%*
Demographic characteristics		
Age ($\mu(SD)$)	31.2	(20.6)
Gender (female)	405	54.2
Race (white)	532	71.3
Employment (employed)	603	80.8
Offender-victim relationship (prior)	565	75.7
Methods of cyber abuse		
Direct abusive messages	506	67.8
Indirect abuse posted online	253	33.9
Subscription to unwanted goods/services	218	29.2
Impersonation online	130	17.4
Surveillance of online activities	160	21.4
Number of methods of abuse ($\mu(SD)$)	1.68	0.94

The typology of perceived victim impact from cyber abuse

A total of 705 respondents described their impact from cyber abuse. Several participants (*n*= 31; 4%) provided nonsensical responses and were excluded from the analyses. The responses ranged from 3 to 382 words in length with 14 words being the average length of a response. In-depth coding of the survey's textual responses revealed five dominant themes related to the degree of impact and the specific ways in which respondents felt their lives were impacted by cyber abuse: psychological, emotional, social, financial/education/work-related and positive impacts. Notably, while a small number of respondents reported some positive outcomes associated with victimization, for the absolute majority of those who specified the type of impact they experienced, the impact was negative (88%). Table 2 presents a summary of the thematic analysis of open-ended responses describing the victim impact from cyber abuse.

Table 2. Summary of core themes describing the victim impact from cyber abuse ($N = 746$) (Table view)

Impact type	*N*	%	μ	*SD*
Psychological/mental health impact	179	24.1	1.46	0.37
Emotional impact	114	15.5	1.24	0.47
Social impact	109	14.7	1.37	0.49
Positive impact	51	6.9	1.19	0.50
Financial/education/employment-related	22	2.9	1.55	0.46

It is important to note here that many responses contained evidence of different types of impacts. Further, several participants (*n*= 164; 23%) reported experiencing only minor or no impact. Those responses were not considered as a major theme as the responses were more indicative of the magnitude of the impact rather than type. Also, a proportion of respondents described the practical steps they had undertaken to prevent re-victimization in the future and were not included as a core theme in this analysis as these responses were not indicative of the type of impact the victims experienced (*n*= 203; 29%). The following is the description of core themes related to the types of victim impact from cyber abuse reported by survey respondents.

Psychological/mental health impact

A psychological/mental health impact was the most common type of impact reported by 180 (26%) respondents. This type of impact reflected some difficulties in processing the outcome of cyber abuse

including evidence the victim experienced depression, anxiety, fear, changes in mood, self-esteem issues, self-efficacy, perceived stress, reduced cognitive functioning, etc.

When participants spoke of feeling fearful or nervous, they referred not only to fear in online spaces but also expressed concern over physical attacks, seeing the perpetrator in public or having their property damaged. For some, this concern translated to a general fear of being in public and some respondents described constantly "looking over their shoulder" or being fearful of others (e.g., family members) being harmed.

I was scared to death that he would wind up hurting someone in my family or myself. [R0041]

Some participants described changes in the ways they viewed themselves after the abuse, including feelings of self-consciousness and decreased self-esteem.

I felt unloved and judged. Like people see me as a bad person to be around. [R0201]

These feelings were often linked to shame and embarrassment. For some participants, having to contact friends, family members and work colleagues to clarify that they were not the author of messages, statements or pictures posted to their accounts was a significant source of embarrassment. Additionally, the concern that people would believe the things that others had written about them also caused feelings of shame and embarrassment.

*T*he*incident was very stressful and embarrassing. I had to explain to several friends that he had targeted, that I had nothing to do with those messages and posts and didn't approve of them being posted. I had to reveal some personal details to those friends in order to "clear my name" in a sense. [R0022]*

The participants often linked their experiences of cyber abuse to mental health issues, such as depression and/or anxiety. In these instances, the abuse either exacerbated an existing condition, or mental health issues emerged as a direct result of the abuse.

It exacerbated my clinical depressive disorder and made me a lot less likely to interact either online or face-to-face. [R0471]

I had a lot of anxiety day and night, I found it hard to sleep and eat as I was constantly worried about this situation, everyday the occurrence continued to get worse, I lost all interest in the things I loved to do, and was constantly depressed. [R0544]

In addition to this, several participants discussed feeling traumatized (including post-traumatic stress disorder), re-traumatized or even spoke about being suicidal after the abuse:

It traumatized me in a way that I don't think I would recover from it. [R0207]

Emotional impact

The second most common theme was of the emotional effect as a result of cyber abuse victimization (*n*= 116; 16%). This type of impact was reflective of the immediate emotional reaction to the incident of cyber abuse, and included the feelings of being sad, frustrated, hurt or upset by the abuse:

I was very upset that night. I still remember how that person made me feel about myself and others. They were making sexual comments about me and others in our guild chat. They got kicked out of our guild so it was okay, but I never really saw the online gaming world as the same. [R0286]

For some, these feelings were significant, for others, these feelings were less severe and more temporary.

I was upset by it but chose to ignore it until he gave up. When he realized he wouldn't get a reaction out of me, he stopped. [R0309]

Also common were the feelings of anger and frustration, often directed at the perpetrator:

It makes me mad. It made me want to do bad things to her. It gives me a lot of disgust. It puts hate in my heart. Has made me cold and distant. [R0053]

or the frustration that the participants could no longer trust the platforms they had enjoyed before the abuse:

It was frustrating because the message was sent over a video game, and it completely took the fun out of playing, and there's no reliable way to report that behavior and have something done about it. [R0225]

Social impact

Significant social impact as a result of the abuse was evident in the responses of 110 (16%) of our participants. The responses in this category reflected changes in social interactions with others, such as being less trusting of others as well as the negative dynamics within interpersonal relationships. For many, the social impact was framed around decreased feelings of trust of either people or of the internet and technology generally, the former of which is relevant to the social impacts of cyber abuse:

I felt disappointed in human behavior in general and became more cynical. [R0085]

Whilst some discussed lessened feelings of trust, others talked about losing all trust in people. For example, one respondent stated:

[I]t scared me into reality. I do not trust anyone. [R0151]

Additionally, several respondents spoke specifically about not trusting men, or being less trusting when in intimate relationships. It appears that experiences of cyber abuse may lead to feelings that a future attack is probable and that it could come from anyone:

It ruined my self-esteem, prevented me from making friends, made guys think I was open for business. Ruined my trust of men, of anyone. [R0313]

Another common theme in textual responses was about how cyber abuse impacted victims' relationships with friends, family, and/or romantic partners:

After this happened, I haven't had any contact with my family. [R0172]

But this had a major effect on my real life. I lost a half dozen friends at least. I was crushed. [R0624]

In regards to romantic partners, most respondents talked about the abuse putting a strain on their relationship, especially where the abuse led their partner to believe that they were being unfaithful. Three respondents stated that their relationship or marriage ended as a result of the abuse:

My husband kept seeing the messages. I told the guy over and over I was happily married and he just kept on. My husband became concerned I was actually thinking of having an affair with this guy. [R0088]

Some reported that feelings of fearfulness and distrust resulted in avoiding or having trouble establishing new friendships or intimate relationships:

My social life greatly suffered, and it became very difficult to trust other people. I also do not have any sort of social media presence (which is rare and difficult to understand for other people) and it has affected future romantic relationships. [R0105]

Positive impact

Interestingly, 52 responses (7%) described some sort of positive impact as a result of experiencing cyber abuse. In most cases, this was not immediate, but there was a particular narrative within many responses where the victims felt as if the abuse had taught them a valuable lesson. These responses were coded into three themes: increased awareness of risks associated with online communication, feelings of control and empowerment, and improved lifestyle. It is important to note that many respondents talked about increased awareness, as a type of 'wake up call':

I think anytime you are bullied it has an effect, especially when it is a family member. It has made me more thankful for what I have and I never take anything for granted. I am also more of aware of my security and the security of my family. [R0367]

I decided to learn more about internet safety and became more aware of my surroundings. That was the first time I ever thought about a home security system that I had installed. [R0407]

Opened my eyes to the reality of Social Media and the dangers it could cause. My incident was very minor and not very affecting but I realize now and very much empathize with victims in this world. [R1268]

And while many respondents described their experience of cyber abuse in terms of a loss of control, a small handful talked about their ability to regain control after the abuse:

I feel like it was a positive effect. I stood up for someone other than myself in that post and I realize that's what this world needs more of. People who stand up for others. I am more outspoken now because I want to inspire others to see hate and mean things and speak out against them. I don't tolerate behavior from bullies like that. [R0200]

I'd say instead of cowering in fear and recusing myself from the Internet, as they likely intended, I became more outspoken and protective of others who experience the same harassment. [R0019]

Financial/education/work-related impact

Financial, education- and work-related impact appears to be the least common type of victim impact (*n*= 22; 3%), which is not surprising considering the interpersonal rather than economic nature of cyber abuse.

Survey respondents reflected on a range of ways in which cyber abuse affected their employment including experiences of being fired from their jobs or choosing to leave their workplace.

I really enjoyed my job, but I had to quit because of the harassment. [R0177]

Several respondents suggested that much of the abuse that they were experiencing was from their coworkers, who had either committed the initial cyber abuse or who had begun harassing the victim as a direct result of the initial abuse. Others talked about how they felt embarrassed at work as a result of the cyber abuse and worried about what their coworkers would think of them and if they would believe the rumors associated with the abuse.

I was also very embarrassed because I think some of my coworkers believed the rumors about me. I now try to avoid public places where I may see any of them again. [R0177]

In another common theme, victims reported that their work performance was affected by the abuse or expressed concern over their professional reputation being affected.

[I] believe my work performance suffered due to the anxiety and fear [I] was experiencing, my authorities were involved eventually, [I] became a recluse and thoroughly have issues trusting now. [R0680]

Two respondents described how cyber abuse impacted their education, resulting in truancy or a reluctance to attend school.

Then friends of friends who I didn't even know started making fun and harassing me as well. I missed a lot of days at school. When I was on campus people would taunt me. [R0181]

This happened awhile back [I] was [very] upset about it but didn't let that control my life, [I] didn't want to go to school because [I] thought everyone was looking at me or talking about it. [R0219]

Are different types of victim impact associated with different perceived levels of impact?

Figure 1 presents box plots for the magnitude of the perceived impact associated with (a) different types of impact (e.g., psychological, emotional, social, etc.) and (b) number of different types of impact. Financial, psychological and social types of impact appear to be associated with higher levels of impact (the respective means are 1.55, 1.46, 1.37). Please note, the financial impact has been reported by a small number of respondents (*n*= 22; 3%), meaning the findings concerning this type of impact may not represent the reality well. A further analysis using a larger sample may provide more clarity about the perceived magnitude of the financial impact. Further, there appears to be a relationship between the magnitude of the impact and the number of experienced types of impact. So, the respondents who experienced more than one impact (for example, psychological, emotional and financial), on average reported a higher magnitude of the impact.

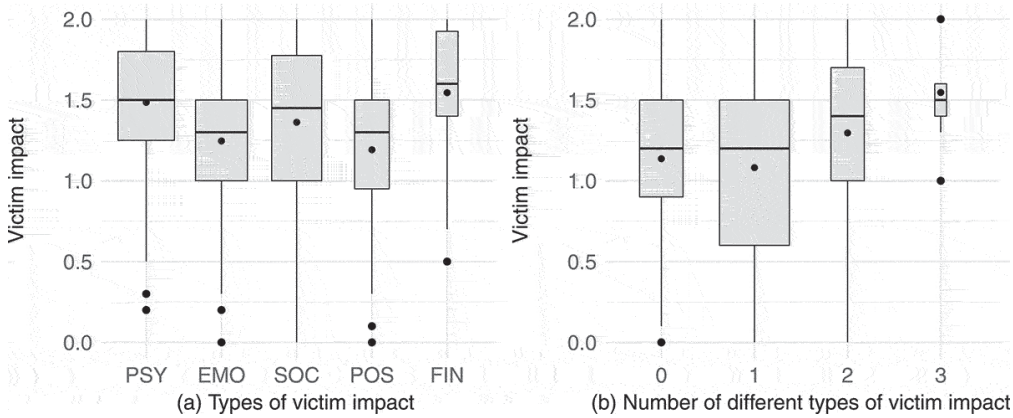

Figure 1. Box plots of magnitude of victim impact for (a) different types of impact (left-hand side panel), and (b) number of different types of impact (right-hand side panel). Here PSY-psychological; EMO-emotional; SOC-social; POS-positive; FIN-financial impact. Dots within the box represent mean values

Please also note that as mentioned earlier, a significant proportion of victims classified their perceived magnitude of impact from cyber abuse as being minimal or no impact, which explains the fact that the average victim impact in the sample (μ = 1.13, SD = 0.60) is quite a bit lower than the levels of the impact associated with specific types (e.g., $\mu_{psychological}$ = 1.46, SD = 0.37).

What factors explain the victim impact from cyber abuse?

Table 3 presents a correlation matrix for all the variables of interest. Victim impact is significantly associated with several variables, in particular, gender, OVR, number of methods of abuse and three out of five specific methods of abuse. While significant, none of these correlations is large.

Table 3. Correlation matrix for all variables of interest ($N = 746$) (Table view)

	01	02	03	04	05	06	07	08	09	10	11	1
[01] Victim impact	1.00	0.01	0.12**	0.02	0.09*	0.13**	−0.03	0.14**	−0.01	0.01	0.16**	0.1
[02] Direct abusive messages		1.00	0.07**	0.18**	0.15**	0.18**	−0.30**	−0.01	−0.03	0.00	0.02	0.7
[03] Indirect abuse posted online			1.00	0.15**	0.19**	0.12**	−0.09**	−0.02	−0.06*	0.03	0.05	0.2
[04] Subscription to unwanted services				1.00	0.25**	0.24**	−0.14**	−0.06*	−0.10**	−0.00	−0.07	0.5
[05] Impersonation online					1.00	0.14**	−0.13**	−0.05*	−0.07**	−0.02	−0.11**	0.4
[06] Surveillance of online activities						1.00	−0.07**	0.02	−0.03	0.00	0.06	0.4
[07] Age							1.00	0.10**	0.20**	0.14**	−0.19**	−0.
[08] Gender								1.00	0.03	−0.13**	0.01	−0
[09] Race									1.00	−0.02	0.04	−0.
[10] Employment										1.00	0.02	0.

[11] Offender-victim relationship	01	02	03	04	05	06	07	08	09	10	1100	0
[12] Number of methods of abuse												1.

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

Figure 2 visualizes the relationship between the victim's gender (left panel (a)) and offender-victim relationship (right panel (b)) and the victim impact. The plots suggest that females are more likely to report a higher level of perceived victim impact compared with males and those who were abused by a stranger.

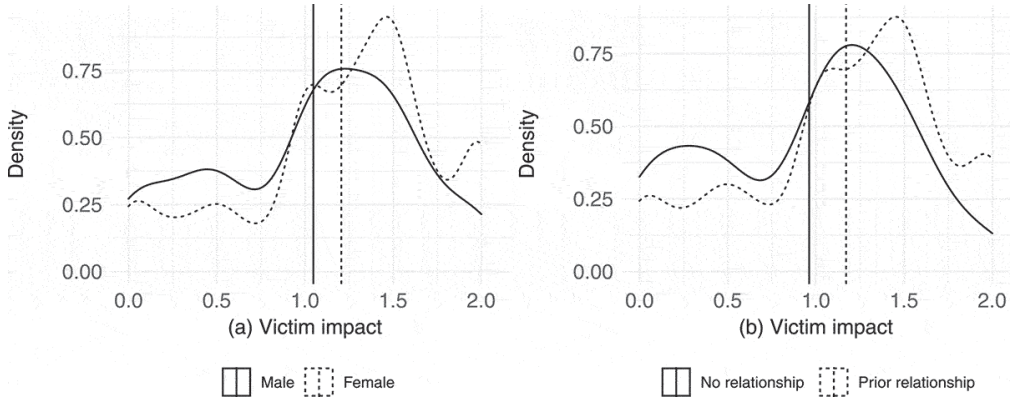

Figure 2. Density plots of (a) victim impact for male and female victims (left-hand side panel), and victim impact for the victims who knew the abuser and those who were abused by a stranger (right-hand side panel). Vertical lines represent mean values

Figure 3 visualizes the relationship between the victim impact and (a) different methods of cyber abuse, and (b) the number of methods of abuse experienced by the victim. While all methods of abuse are associated with only slightly higher than the "somewhat affected" level of impact, Method 5 (surveillance of online activities) appears to have the highest impact on its victims (μ = 1.26), but the difference is quite small. There also appears to be a positive relationship between the number of methods of abuse experienced by the victim and the perceived impact. Please note, only a small number of respondents experienced four or more types of abuse (n= 45). Interestingly, several methods of abuse are strongly associated with some of the methods of abuse, in particular, with Method 1 (direct abusive messages) and Method 3 (subscription to unwanted goods/services) (see Table 3). This suggests that if a victim experiences Methods 1 or 3, he/she is likely to experience multiple methods of abuse. Also, of note is the fact that the number of methods of abuse is also significantly negatively (albeit not strongly) correlated with race (r= −0.08, p < .01) and age (r= −0.35, p < .01), suggesting that whites and older victims are less likely to experience multiple methods of abuse.

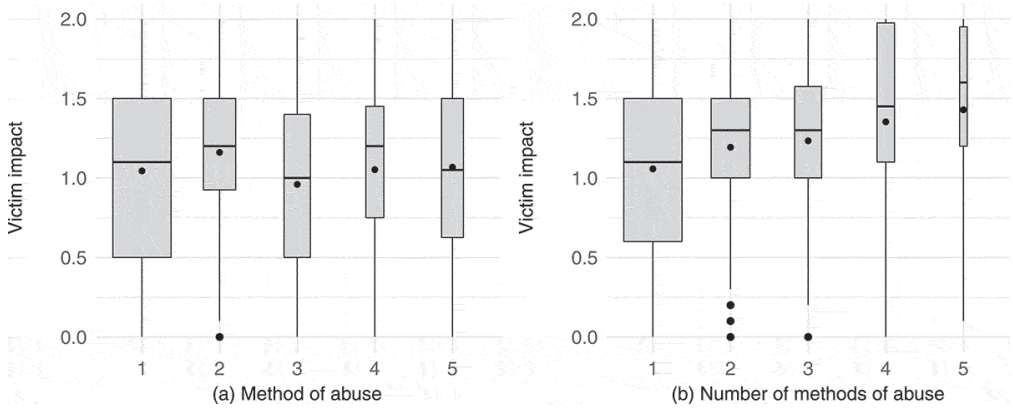

Figure 3. Box-plots of victim impact for (a) different methods of cyber abuse (left-hand side panel), and (b) the number of methods of abuse experienced by the victim (right-hand side panel). Here, 1-direct abusive messages, 2-indirect abuse posted online, 3-subscription to unwanted goods/services, 4-impersonation online, 5-surveillance of online activities. The width of the boxes is proportionate to the number of respondents in each group

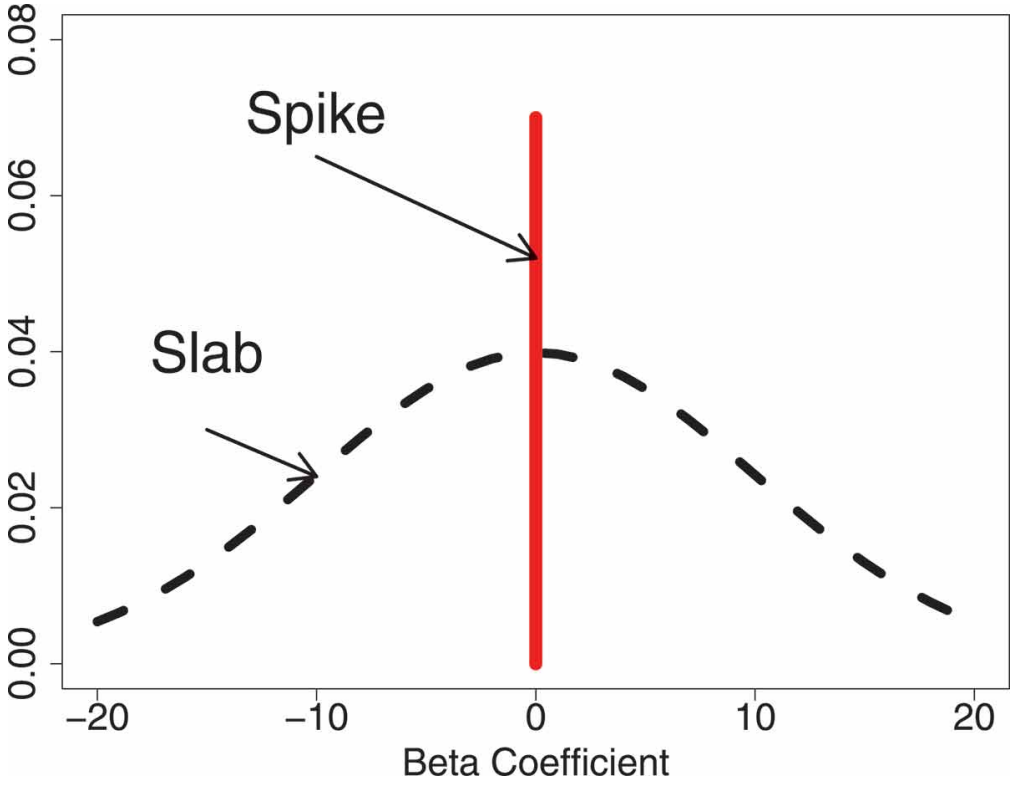

Figure 4. A schema of spike-slab algorithm

Table 4 presents the results of our analysis using linear regression with Bayesian variable selection explaining the magnitude of perceived impact from cyber abuse. The posterior means and standard deviations for each coefficient included in the explanatory model are formed by averaging over the predictions from each plausible model. The coefficients are presented in the order of their probability of inclusion, which reflects the importance of their contribution to the overall explanatory model. Please note, if the 95% credible interval does not include 0, then one may conclude that the coefficient is significantly different from 0, and the predictor is important. Table 4 summarizes the best five models in terms of their probability of providing the best explanation to the variation in perceived victim impact.

Table 4. Multiple linear regression with Bayesian variable selection for victim impact from cyber abuse ($N = 746$). Check marks indicate coefficients included in the model (Table view)

Coefficient	β	*SD*	*2.5%*	*97.5%*	*Pr*	*Model***

Coefficient	*β*	*SD*	*2.5% HPD**	*97.5% HPD**	*Pr* ($\beta \neq 0$)	*Model***				
						1	2	3	4	5
CONSTANT	0.78	0.08	0.64	0.93	1.00	X	X	X	X	X
Offender-victim relationship	0.19	0.05	0.09	0.29	0.99	X	X	X	X	X
Gender	0.14	0.05	0.05	0.24	0.96	X	X	X	X	X
Number of methods	0.07	0.04	0.00	0.12	0.82	X	X		X	
Indirect abuse posted online	0.10	0.13	0.00	0.35	0.41		X	X		X
Surveillance of online activities	0.02	0.05	0.00	0.17	0.19			X		X
Direct abusive messages	−0.01	0.03	−0.08	0.00	0.10				X	
Impersonation online	0.01	0.03	−0.00	0.10	0.09				X	
Subscription to unwanted goods/services	−0.01	0.02	−0.07	0.00	0.08					
Employment	0.00	0.01	0.00	0.00	0.04					
Age	0.00	0.000	0.00	0.00	0.04					
Race	0.00	0.01	0.00	0.00	0.04					
Posterior Probability (%)						0.33	0.17	0.05	0.05	0.03

*Best 5 models (cumulative posterior probability = 63%). **Highest Posterior Density. ***Probability of inclusion

The stochastic search algorithm employed in this analysis compares all plausible models with each other in terms of how likely each model is to provide the best explanation of the phenomenon of interest and then presents the top five models. The posterior probability of the model shows how much a particular model is more or less likely compared with the situation where all plausible models are equally likely. As shown in Table 4, the top five models have a cumulative posterior probability of 63%, which suggests that the rest of the plausible models with the cumulative posterior probability of 37% are much less likely. Moreover, the top best model has a posterior probability of over 30% with the second best model's posterior probability only being about half of that (17%). This means we can focus our attention on the first best model as the most likely model and safely disregard the rest of the plausible models.

Based on the best model (Model 1) we can conclude that, given the data, the combination of the preexisting offender-victim relationship, the victim's gender and the number of methods of cyber abuse experienced by the victim provide the best explanation to the variation in the perceived victim impact from cyber abuse. These three factors all have the probability of inclusion of over 50%. Notably, the offender-victim relationship and the victim's gender have the probability of inclusion of 99 and 96% respectively, are included in all five top best models and clearly are the most influential factors. Based on our data, victims who were abused by someone they knew were 21% more likely to report higher than average victim impact compared with those who were abused by a stranger. Conversely, female victims were 15% more likely to be more affected by cyber abuse than male victims. For each additional number of methods of abuse experienced by the victim, the chances of higher than average impact increased by 7%.

Besides, Method 2 (indirect abuse posted online) is potentially an important explainant. While using our data, the probability of inclusion for this variable is below 50%, with the probability of over 40%, we cannot dismiss it completely just yet, unlike other methods of abuse with very low probabilities of inclusion (between 19 and 8%). It appears that those who experience indirect abuse posted online are more likely to report higher victim impact. Notably, except for gender, none of the measured demographic characteristics (i.e. age, employment, race) explains the perceived magnitude of victim impact.

Discussion

This study contributes to the existing literature in two ways. First, we advance a new comprehensive typology of the perceived impacts experienced by adult victims of cyber abuse; and second, our analyses explain, albeit partially, the variable magnitude of victim impact. Consistent with previous research (Duggan 2017), a large proportion of our sample (50%) reported experiencing some type of cyber abuse victimization at least once in their lifetime. Our findings suggest that similar to victims of conventional types of crime and deviance, victims of cyber abuse experience several different types of impact, including psychological, emotional, social, financial and positive impacts. In line with previous literature (Fissel and Reyns 2019), we found psychological, and mental health-related effects to be the most commonly experienced. Also, similar to the earlier research, in our study, victims reported mostly negative impacts from cyber abuse (see, for example, Fissel 2018; Nobles et al. 2014; Short et al. 2014).

Interestingly, a considerable minority of survey participants spoke about some positive outcomes, such as the feeling in control of the situation, empowerment and gratitude. This is an important finding as it suggests that similar to victims of traditional forms of crime, victims of cyber abuse can achieve post-traumatic growth, a process of learning new coping strategies or gaining a new perspective following a trauma (Hill 2009). Further research focusing specifically on resilience in the context of victimization and the factors associated with it could be particularly beneficial to better support victims of cyber abuse and to inform prevention policies and strategies.

In terms of the magnitude of the perceived impact, we found that on average, the perceived impact reported by victims was slightly higher than "somewhat affected" (1.13 out of maximum 2.0) with a relatively small proportion of respondents experiencing extreme levels of impact. This suggests that while serious consequences of cyber abuse are a distinct possibility, they are not very common. We also found no big differences between different types of impact in terms of the associated magnitude of impact with the financial impact having the largest effect (as mentioned earlier, with only 20 respondents reporting some sort of financial impact, these results may be an artifact of our sample). Our findings suggest that victims of cyber abuse may need a variety of types of support services, in particular, psychological counseling and mental health treatment as well as financial and employment-related support.

The remainder of the study focused on explaining the variable magnitude of victim impact using victim characteristics, and methods of cyber abuse experienced by the victim. Our findings support previous research: being a female and having a prior relationship with the abuser are in fact highly predictive of higher levels of perceived impact (Baum et al. 2009; Johnson and Kercher 2009; Korkodeilou 2017; Sheridan and Lyndon 2012). Specifically, females are 15% more likely to report a higher perceived level of victim impact. Further, in line with previous research, victims who knew their abuser were 21% more likely to report higher than average victim impact than those who did not.

Those abused by someone they knew were likely on the receiving end of some intense interpersonal grievance. One example of such dynamic could be related to issues between intimate or former intimate partners and in general in the context of domestic or family violence. Unsurprisingly, we found that the majority of victims in our sample knew their abusers and a large proportion of them were in a domestic/family/intimate partner relationship (or former relationship) (36% of all victims in our sample). Likely, the relationship between gender (being a female) and victim impact is explained by the nature of the relationship between female victims and their abusers. As Table 3 suggests, gender and OVR are significantly, albeit weakly, negatively correlated, meaning female victims in our sample are more likely to have known their abusers. These findings suggest that female victims of cyber abuse, especially abused by someone they know, may be especially in need of victim support services.

Further, similar to Johnson and Kercher (2009) but contrary to Fissel and Reyns (2019), the number of different methods of abuse experienced in one incident was found to be a significant predictor of the perceived magnitude of impact. We hypothesize that the number of methods of abuse is reflective of the intensity of abuse and is likely to be related to a more serious interpersonal grievance; when multiple

methods of abuse are utilized, it may be because the abuser wants to make sure the desired effect (i.e. damage to the victim) is achieved.

A new finding was that there was no significant relationship between the method of cyber abuse experienced by the victim and the perceived magnitude of impact. Table 3 suggests that even though some methods of abuse (in particular, Methods 2 and 5) appear to be significantly associated with higher victim impact, these associations are quite weak. This suggests that the effect of the offense/deviant behavior type may be observed only when the differences in types are quite substantial. This is in line with research that produced inconclusive results when comparing offline and online versions of interpersonal violence like stalking (Nobles et al. 2014; Sheridan and Grant 2007). Victim characteristics and the nature of the offender-victim relationship are likely to be more important explainants of victim impact than the offense characteristics. However, further research is needed to establish whether this is the case.

Limitations

Our findings should be interpreted in light of the limitations of this study with most related to the data collection methodology employed. Considering the non-probability nature of our sample, we cannot generalize the findings to our target population (i.e. U.S. adults). Also, the data analyzed in this study is based on self-reports of victims of cyber abuse and may suffer from some biases, recall issues and other issues common for this type of data. Due to the non-probability nature of our sample, some types of victim impact experienced by population subgroups that are underrepresented (for example, non-whites) or possibly not represented at all in our sample may be missing from our findings. And further, due to the specific nature of the sample analyzed in this study–our respondents are likely to be more exposed to the risk associated with the cyberspace environment–the average magnitude of victim impact may not be representative of the effect of cyber abuse in the community.

Additional limitations are related to how and what was measured to answer our research questions. In this study, we treated cyber abuse as an umbrella term for any behavior that involves stalking or harassment of adult victims. As we mentioned earlier, these behaviors are many and various. We focused on just five types of cyber abuse victimization that are commonly mentioned in literature. Other behaviors not examined in this study may be associated with different patterns of the perceived victim impact and different explanatory factors. Future research should examine a wider nomenclature of cyber abusive behaviors and their effect on the perceived victim impact.

Further, we have not measured the number of times different abusive tactics were utilized (e.g., 3 derogatory messages) but rather the number of different methods (e.g., derogatory messages, surveillance and impersonation online). It could be beneficial to see whether the former is a better predictor of the perceived magnitude of an impact compared with the latter. This is particularly important considering that Fissel and Reyns (2019) found no effect of the number of online pursuit behaviors on negative consequences of cyberstalking. We also did not ascertain whether the incident the participants described to us was the very first cyber abuse experience they had or they experienced this type of abuse many times before. Further, we have only considered a limited number of possible methods of cyber abuse; it is possible that including other methods of abuse into the explanatory model could yield different results and could be established in future research.

Conclusion

This study was designed to contribute to our understanding of how cyber abuse affects its victims and why some people are more affected than others. Our findings suggest, similar to victims of traditional forms of crime and deviance, victims of cyber abuse are affected in many different ways. In particular, we have identified five types of perceived victim impact: psychological, emotional, social, financial and positive.

The latter finding is particularly important as it highlights the importance of emotional resilience in surviving both traditional and online forms of abuse.

In terms of the variable magnitude of the perceived victim impact, our study focused on three possibilities: the victim's characteristics, the offender-victim relationship or the methods of abuse experienced by the victim. We found that female victims and those who knew their abuser were more likely to experience higher victim impact than male victims and those who were abused by a stranger. Also, the abuse intensity, measured here as the number of different methods of abuse employed against the victim in one incident, was found to be highly predictive of higher victim impact, however, the specific method of abuse was not found to be an important predictor. Future research should consider other methods of cyber abuse as well as the number of times each method was used against the victim as potential important explainants of the victim impact.

Notes

1. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19, and young people as any persons between ages 10 and 24 (World Health Organization n.d.).
2. The survey was conducted in accordance with the ethical requirements of the Human Research Ethics Committee of the host university and complied with ethics guidelines set forth by the HREC recommendations. Participants were informed that their data would be treated anonymously, no identifying information would be collected and they could withdraw from the survey at any time without providing a reason.

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References

Baum, K., S. Catalano and K. Rose. (2009). *Stalking Victimisation in the United States*. Retrieved January 15, 2021 https://www.justice.gov/sites/default/files/ovw/legacy/2012/08/15/bjs-stalking-rpt.pdf

Bech, P. 2004. "Measuring the Dimension of Psychological General Well-Being by the WHO-5s 119." *Quality of Life Newsletter* 32:15–16.

Bennett, D. C., E. L. Guran, M. C. Ramos, and G. Margolin 2011. "College Students' Electronic Victimization in Friendships and Dating Relationships: Anticipated Distress and Associations with Risky Behaviors." *Violence and Victims* 26(4):410–29. Crossref.

Bocij, P. 2006. *Cyberstalking: Harassment in the Internet Age and How to Protect Your Family*. Westpoint, CT: Praeger Publishers.

Bocij, P. and L. McFarlane. 2003. "Cyberstalking: The Technology of Hate." *The Police Journal: Theory, Practice and Principles* 76 (3):204–21. Crossref

Braun, V. and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2):77–101. Crossref

Broidy, L. 2001. "A Test of General Strain Theory." *Criminology* 39 (1):9–35. Crossref

Canada, Statistics (2016). *Study: Cyberbullying and Cyberstalking among Internet Users Aged 15 to 29 in Canada*. Retrieved 15 January, 2021 http://www.statcan.gc.ca/daily-quotidien/161219/dq161219a-eng.htm?HPA=1

Dinisman, T. and A. Moroz (2017). *Understanding Victims of Crime: The Impact of Crime and Support Needs*. Retrieved 15 January, 2021 https://www.victimsupport.org.uk/help-and-support/coping-crime/how-can-crime-affect-you/.

Dreßing, H., J. Bailer, A. Anders, H. Wagner, and C. Gallas. 2014. "Cyberstalking in a Large Sample of Social Network Users: Prevalence, Characteristics, and Impact upon Victims." *Cyberpsychology, Behavior, and Social Networking* 17 (2):61–67. Crossref.

Duggan, M. (2014). *Online Harassment*. Retrieved 15 January, 2021 http://www.pewinternet.org/2014/10/22/online-harassment/

Duggan, M. (2017). *Online Harassment*. Retrieved 15 January, 2021 http://www.pewinternet.org/2017/07/11/online-harassment-2017/

Dutton, M. and R. Greene. 2010. "Resilience and Crime Victimization." *Journal of Traumatic Stress* 23 (2):215–22. Crossref.

Farley, S., I. Coyne, C. Sprigg, C. Axtell, and G. Subramanian. 2015. "Exploring the Impact of Workplace Cyberbullying on Trainee Doctors." *Medical Education* 49(4):49. Crossref.

Fisher, B. S., F. T. Cullen, and M. G. Turner. 2000. *The Sexual Victimization of College Women*. Washington, DC: US Department of Justice.

Fissel, E. R. 2018. "The Reporting and Help-seeking Behaviours of Cyberstalking Victims." *Journal of Interpersonal Violence* 1–26. Crossref

Fissel, E. R. and B. W. Reyns. 2019."The Aftermath of Cyberstalking: School, Work, Social, and Health Costs of Victimization."*American Journal of Criminal Justice*. 45: 70–87.

Hay, C. 2001. "Parenting, Self-control, and Delinquency: A Test of Self-control Theory." *Criminology* 39 (3):707–36. Crossref

Hill, J. K. (2009). *Victims of Crime Research Digest, Issue No. 2*. Retrieved January 15, 2021 https://www.justice.gc.ca/eng/rp-pr/cj-jp/victim/rd09_2-rr09_2/p0.html

Hokoda, A., H. H. A. Lu, and M. Angeles. 2006. "School Bullying in Taiwanese Adolescents." *Journal of Emotional Abuse* 6 (4):69–90. Crossref

Jenaro, C., N. Flores, and C. P. Frias. 2018. "Systematic Review of Empirical Studies on Cyberbullying in Adults: What We Know and What We Should Investigate." *Aggression and Violent Behavior* 38:113–22. Crossref.

Johnson, M. C. and G. A. Kercher. 2009. "Identifying Predictors of Negative Psychological Reactions to Stalking Victimization." *Journal of Interpersonal Violence* 24 (5):866–82. Crossref.

Korkodeilou, J. 2017. "'No Place to Hide': Stalking Victimisation and Its Psycho-social Effects"." *International Review of Victimology* 23 (1):17–32. Crossref

Kraft, E. and J. Wang. 2010. "An Exploratory Study of the Cyberbullying and Cyberstalking Experiences and Factors Related to Victimization of Students at a Public Liberal Arts College." *International Journal of Technoethics* 1 (4):74–91. Crossref

Krippendorff, K. 2013. Content Analysis: An Introduction to Its Methodology. *3rd Ed* Thousand Oaks: SAGE Publications, Inc.

Marin, J. -M. and C. P. Robert. 2014. *Bayesian Essentials with R*. New York: Springer New York.

McFarland, C. and C. Alvaro. 2000. "The Impact of Motivation on Temporal Comparisons: Coping with Traumatic Events by Perceiving Personal Growth." *Journal of Personality and Social Psychology* 79 (3):327–43. Crossref.

Mishna, F., C. Regehr, A. Lacombe-Duncan, J. Daciuk, G. Fearing, and M. Van Wert. 2018. "Social Media, Cyber-aggression and Student Mental Health on a University Campus." *Journal of Mental Health* 27(3):1–8. Crossref.

Murray, C. 2010. "Conceptualizing Young People's Strategies of Resistance to Offending as 'Active Resilience'." *The British Journal of Social Work* 40(1):115–32. Crossref.

Nobles, M. R., B W. Reyns, K. A. Fox, and B. S. Fisher. 2014. "Protection against Pursuit: A Conceptual and Empirical Comparison of Cyberstalking and Stalking Victimization among A National Sample." *Justice Quarterly* 31 (6):986–1014. Crossref.

Parsons-Pollard, N. and L. J. Moriarty. 2009. "Cyberstalking: Utilizing What We Do Know." *Victims & Offenders* 4 (4):435–41. Crossref

Peer, E., J. Vosgerau, and A. Acquisti. 2014. "Reputation as a Sufficient Condition for Data Quality on Amazon Mechanical Turk." *Behavior Research Methods* 46 (4):1023–31. Crossref

Raftery, A. 1995. "Bayesian Model Selection in Social Research." *Sociological Methodology* 25:111–63. Crossref

Reyns, B. W., B. Henson, and B. S. Fisher. 2011. "Being Pursued Online: Applying Cyber- Lifestyle Routine Activities Theory to Cyberstalking Victimization." *Criminal Justice and Behavior* 38 (11):1149–69. Crossref

Reyns, B. W. and C. M. Englebrecht. 2010. "The Stalking victim's Decision to Contact the Police: A Test of Gottfredson and Gottfredson's Theory of Criminal Justice Decision Making." *Journal of Criminal Justice* 38 (5):998–1005. Crossref.

Rumgay, J. 2004. “Scripts for Safer Survival: Pathways Out of Female Crime.” *The Howard Journal of Criminal Justice* 43 (4):405–19. Crossref.

Rutter, M. 2006. “Implications of Resilience Concepts for Scientific Understanding.” *Annals of the New York Academy of Sciences* 1094 (1):1–12. Crossref.

Schenk, A. and W. Fremouw. 2012. “Prevalence, Psychological Impact, and Coping of Cyberbully Victims among College Students.” *Journal of School Violence* 11 (1):21–37. Crossref.

Shapland, J. and M. Hall. 2007. “What Do We Know about the Effects of Crime on Victims?” *International Review of Victimology* 14 (2):175–217. Crossref

Sheridan, L. and A. Lyndon. 2012. “The Influence of Prior Relationship, Gender, and Fear on the Consequences of Stalking Victimization.” *Sex Roles: A Journal of Research* 66 (5–6):340–50. Crossref.

Sheridan, L. and T. Grant. 2007. *Is Cyberstalking Different?* Psychology, Crime & Law: 13 (6): 627–640, Crossref.

Short, E., A. Guppy, J. A. Hart, and J. Barnes. 2015. “The Impact of Cyberstalking.” *Studies in Media and Communications* 3 (2):1–15. Crossref.

Short, E., S. Linford, J. M. Wheatcroft, and C. Maple. 2014. “The Impact of Cyberstalking: The Lived Experience - a Thematic Analysis.” *Studies in Health Technology and Informatics* 199:133–37.

Stephens, M. 2007. *A History of News*. New York: Oxford University Press.

Stets, J. E. and M. J. Carter. 2012. “A Theory of the Self for the Sociology of Morality.” *American Sociological Review* 77 (1):120–40. Crossref

Thompson, M. 2000. “Life after Rape: A Chance to Speak?” *Sexual and Relationship Therapy* 15 (4):325–43. Crossref.

Tjaden, P. and N. Thoennes. 2000. “Prevalence and Consequences of Male-to-female and Female-to-male Intimate Partner Violence as Measured by the National Violence against Women Survey.” *Violence Against Women* 6 (2):241–161. Crossref

Vakhitova, Z. I., and C. L. Alston-Knox. 2018. “Non-significant P-values? Strategies to Understand and Better Determine the Importance of Effects and Interactions in Logistic Regression.” *PLoS ONE* 13 (11):11. Crossref.

Vakhitova, Z. I., C. L. Alston-Knox, D. M. Reynald, M. K. Townsley, and J. L. Webster. 2019. “Lifestyles and Routine Activities: Do They Enable Different Types of Cyber Abuse?” *Computers in Human Behavior* 101:225–37. Crossref.

Vakhitova, Z. I. and D. M. Reynald. 2014. “Australian Internet Users and Guardianship against Cyber Abuse: An Empirical Analysis.” *International Journal of Cyber Criminology* 8 (2):156–71.

Vakhitova, Z. I., D. M. Reynald, and M. K. Townsley. 2016. “Toward the Adaptation of Routine Activity and Lifestyle Exposure Theories to Account for Cyber Abuse Victimization.” *Journal of Contemporary Criminal Justice* 32 (2):169–88. Crossref

Van Gelder, J. -L. and R. E. De Vries. 2012. “Traits and States: Integrating Personality and Affect into a Model of Criminal Decision Making.” *Criminology* 50 (3):637–71. Crossref

Walklate, S. 2011. “Reframing Criminal Victimization: Finding a Place for Vulnerability and Resilience.” *Theoretical Criminology* 15 (2):179–94. Crossref.

Wong, D. S. W., H. C. Chan, and C. H. K. Cheng. 2014. “Cyberbullying Perpetration and Victimization among Adolescents in Hong Kong.” *Children and Youth Services Review* 36:133–40. Crossref.

World Health Organization (n.d.). *Adolescent Health in the South-East Asia Regions*. Retrieved January 15, 2021 https://www.who.int/southeastasia/health-topics/adolescent-health

Worsley J. D., J. M. Wheatcroft, E.Short, and R.Corcoran. “Victim’s Voices: Understanding the Emotional Impact of Cyber-stalking and Individual’s Coping Responses.” *SAGE Open* 7 (2):1–13.

Yehuda, R. 2006. “Developing an Agenda for Translational Studies of Resilience and Vulnerability following Trauma Exposure.” *Annals of the New York Academy of Sciences* 1071 (1):379–39. Crossref