Research Article

The Abuse of Technology in Domestic Violence and Stalking

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Abstract

We focus on an emerging trend in the context of domestic violence—the use of technology to facilitate stalking and other forms of abuse. Surveys with 152 domestic violence advocates and 46 victims show that technology—including phones, tablets, computers, and social networking websites—is commonly used in intimate partner stalking. Technology was used to create a sense of the perpetrator's omnipresence, and to isolate, punish, and humiliate domestic violence victims. Perpetrators also threatened to share sexualized content online to humiliate victims. Technology-facilitated stalking needs to be treated as a serious offense, and effective practice, policy, and legal responses must be developed.

Keywords

technology, stalking, domestic violence

Introduction

This article examines the research findings of the SmartSafe study conducted by the Domestic Violence Resource Centre Victoria (DVRCV). With this study, we aimed to examine technology-facilitated stalking in the context of domestic violence in Victoria, Australia. Stalking is a prevalent crime in Australia, with one in every five women above the age of 15 years reporting they have been stalked (Australian Bureau of Statistics, 2006).[1] Contrary to popular misconceptions, research shows that the majority of stalking is perpetrated not by strangers or acquaintances but by intimate partners or ex-partners (Spitzberg & Cupach, 2007). Evidence demonstrates that men

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are the main perpetrators of intimate partner stalking, both in Australia and internationally (Kuehner, Gass, & Dressing, 2012; Logan & Walker, 2009; Strand & McEwan, 2011). Reviews of international research demonstrate that women are more likely to be stalked than men (Logan, 2010; Spitzberg & Cupach, 2007), and are more likely to experience fear due to stalking (Sheridan & Lyndon, 2010).

In this study, we focused upon an emerging trend in intimate partner stalking in the context of domestic violence: the use of technology to facilitate stalking and other forms of abuse. Research studies on technology-facilitated stalking in the context of domestic violence are limited (Dimond, Fiesler, & Bruckman, 2011; Hand, Chung, & Peters, 2009). Therefore, we conducted a scoping study to determine (a) whether technology-facilitated stalking is an issue for women experiencing domestic violence and (b) whether mobile technologies (such as smartphones) present further opportunities for the perpetration of stalking and domestic violence against women. To ground the study, we first review previous studies on intimate partner stalking in general and then explore the available empirical research on technology-facilitated intimate partner stalking.

What Is Intimate Partner Stalking?

Stalking encompasses a pattern of repeated, intrusive behaviors—such as following, harassing, and threatening—that cause fear in victims (Logan & Walker, 2009). In the context of domestic violence, stalking tends to be an abusive behavior that perpetrators use to control the victim after the relationship has ended.[2] (Hand et al., 2009; Logan, Leukefeld, & Walker, 2000). However, stalking behaviors often occur as part of the relationship before separation (Cox & Speziale, 2009; Melton, 2007).

Stark (2007) argues that intimate partner stalking is a form of coercive control. *Coercive control* is a theoretical framework that encompasses physical abuse that occurs in domestic violence, but which also includes tactics not traditionally viewed as serious forms of abuse. These tactics include strategies to control and intimidate, such as isolation, surveillance, threats of violence, micromanagement of daily activities (e.g., regulation of showering and eating) and shaming (Stark, 2007). The theory of coercive control also encompasses the effects on the victims of these tactics. Stark (2012) believes these effects have more in common with the experiences of hostages and the victims of kidnappings than of victims of conventional assaults. Stark acknowledges that although women can be abusive in intimate relationships, men are the main perpetrators of coercive control because it is a form of violence rooted in systemic inequality, which affords men a sex-based privilege. Stark views this sex-based privilege as the essence of coercive control, where male offenders "exploit persistent sexual inequalities in the economy and in how roles and responsibilities are designated in the home and community to establish a formal regime of domination/subordination behind which they can protect and extend their privilege" (p. 206).

Stalking by intimate partners is a risk factor for serious violence, including sexual violence and homicide, but often it is not taken seriously (Scott, Lloyd, & Gavin, 2010). An Australian study found that police and many community members perceive

intimate partner stalking as less serious than stranger stalking (Scott et al., 2010). However, research suggests that those who stalk their partners are particularly persistent and dangerous (Tjaden & Thoennes, 1998). Intimate partner stalking can occur for many years, often continuing for longer periods than stranger or acquaintance stalking. A national U.S. survey found that cases involving stalking by intimate partners lasted 2.2 years on average, compared with 1.1 years for stalking by others (Tjaden & Thoennes, 1998). Intimate partner stalking is also distinct from non-partner stalking due to the use of a wider array of, and more frequent, stalking tactics, a heightened risk of threats and violence as well as greater psychological distress for the victim (Logan & Walker, 2009). Intimate partner stalking has been linked to an increased risk of homicide; one study found that 68% of women experienced stalking within the 12 months prior to an attempted or actual homicide (McFarlane, Campbell, & Watson, 2002). The most frequent types of intimate stalking behaviors preceding attempted or actual homicides include following or spying, making unwanted phone calls, and keeping the victim under surveillance (McFarlane et al., 2002).

Technology-Facilitated Stalking and Abuse in the Context of Domestic Violence

The first organization to highlight the use of technology in domestic violence was the Safety Net Project, which started in 2002 in the United States (Fraser, Olsen, Lee, Southworth, & Tucker, 2010; Southworth, Dawson, Fraser, & Tucker, 2005). Both Fraser et al. (2010) and Southworth et al. (2005) emphasize that mobile technologies can be useful tools for victims, enhancing their safety and assisting in recovery from abuse. However, Fraser et al. argue that technology can provide perpetrators with more tools and greater scope to intimidate and control their victims. The effect of repeated phone calls and text messages on a victim's life should not be underestimated. Fraser et al. contend that harassing and unwanted calls and text messages create a pattern of stalking tactics that aims to control the victim. Some perpetrators text and phone repeatedly, creating dread and fear in the victim that the harassment will never end. Some women receive only one text or call daily or weekly, but this can be equally as terrifying in the context of their specific domestic-abuse history.

Hand et al. (2009) discuss the potential misuse of information and communication technologies (ICTs) by perpetrators of domestic violence in Australia. Referring to Stark's (2007) work on coercive control, the authors argue that ICTs can provide further opportunities for controlling women, enabling perpetrators to abuse women in new and more extensive ways. These include placing a woman under surveillance, which Hand et al. argue could erode her sense of "feeling safe" (p. 3) after leaving a violent relationship.

There is little published empirical research on the use of technology in intimate partner stalking. In a large U.S. study on stalking, 25% of stalking victims reported being stalked via technology, such as email (Baum, Catalano, Rand, & Rose, 2009). Fraser et al. (2010) note that, in line with evolving technologies, this percentage is now likely to be higher and increasing. Two studies of university students in the United

States found that technology is commonly used to monitor, control, or harass an intimate partner (Burke, Wallen, Vail-Smith, & Knox, 2011; Melander, 2010).

Burke et al. (2011) examined the use of technology to monitor and control intimate partners in a sample of 804 undergraduates at a U.S. university. The study found that half of both female and male participants were either perpetrators or victims of technology-facilitated abuse. Of female college students, 25% self-reported that they monitored their partner's behavior by checking emails compared with 6% of male students. Female students reported receiving repeated threatening, harassing, or insulting emails and/or instant messages, with 10-15% experiencing this behavior from their partner. Males were more likely than females to use hidden cameras and global positioning systems (GPS) to control and monitor their partner: 3% of males used hidden cameras compared with 0.4% of females; 5% of males used GPS compared with 1% of females (Burke et al., 2011).

Melander (2010) used focus groups to examine intimate partner cyber harassment among 39 college students in the United States. Melander found that students were using technology, such as mobile phones and social networking sites, to control intimate partners. Controlling behaviors included monitoring a partner or ex-partner via technology, such as GPS tracking, or constantly texting and harassing the victim for his or her location. Participants perceived constant texting, in general, as a form of control and intimidation. Melander emphasizes that because of technology, perpetrators were able to maintain control over their victims, even when they were in a different location. Technology provided perpetrators with quick, easy methods to harass and abuse, and this behavior was often more public. As one participant wrote, "You can make it sting a lot more," particularly when using social media to intimidate and embarrass a partner or ex-partner (Melander, 2010, p. 266).

There are limited studies into the use of technology to share, or threaten to share, sexually explicit messages or images (known as "sexting") in the context of domestic violence. Sexting can be defined as "the creating, sharing, sending or posting of sexually explicit messages or images via the internet, mobile phones or other electronic devices by people, especially young people" (Law Reform Committee, 2013, p. 19). An inquiry into sexting reported examples of the use of sexting in domestic violence (Law Reform Committee, 2013). Anecdotal evidence provided to the inquiry revealed that perpetrators are using mobile phone images and videos of women, provided consensually or coercively, to threaten, harass, and control victims of domestic violence (Law Reform Committee, 2013).

A qualitative study conducted by Ringrose, Gill, Livingstone, and Harvey (2012) focused on sexting, in general, among young people in the United Kingdom. Their research found that sexting is often coercive and linked with harassment, and sometimes violence, against young women. In a U.S. study into technology abuse among teenagers, more than 10% of the participants said that a partner had shared a private picture of them; 20% said they had been asked via technology (e.g., the Internet or a mobile phone) to engage in unwanted sexual activity (Picard, 2007). Similarly, a large-scale study in the United States (Zweig, Dank, Lachman, & Yahner, 2013) found that teenagers in relationships were being sexually abused and coerced via technology.

Girls reported being victims of technology abuse at a higher rate than boys, with 29% of girls reporting abuse and 23% of boys. This difference was increased when the reported abuse involved sexual behavior. Approximately 15% of girls reported sexualized technology abuse, compared with 7% of boys (Zweig et al., 2013). In one of the only studies on the experiences of technology-facilitated abuse among victims of domestic violence, Dimond et al. (2011) interviewed 10 women at a domestic violence shelter in the United States. The researchers found that perpetrators are using GPS as well as location-based features on Facebook to track women. The women also reported being threatened via text messages that were difficult to block. The women spoke of the challenge in maintaining their safety when using social media such as Facebook, because when friends tagged[3] them in photos, the privacy of their location could be compromised. Although the authors argue that more research is needed into the ways in which perpetrators use technology to control and abuse women, they emphasize that victims should have the right to safely access technology, which can enhance their connections with friends and family.

The SmartSafe Study

The SmartSafe study was an initiative of the DVRCV, one of the first domestic violence organizations in the world to have online resources for victims. The DVRCV has used technology to prevent domestic violence for more than 15 years. Our work has included websites focused on young people and healthy relationships, YouTube videos, blogs, and online quizzes. Our central aim with the SmartSafe study was to examine how mobile technologies provide additional opportunities for the perpetration of stalking and domestic violence against women.[4] Although we considered all technology-facilitated stalking, we focused in particular on smartphones, which are mobile (or "cell") phones with Internet access, GPS, and video capability. Studies show that people are increasingly using mobile devices rather than computers to access the Internet, particularly for the purposes of social media (Dudley-Nicholson, 2013).

Given the limited research in the area of technology-facilitated stalking and domestic violence, we designed this study as an exploratory scoping project. Our aim with this research was to assist practice, provide awareness, and increase knowledge for workers in the domestic violence sector, our goal ultimately being to improve outcomes for women experiencing violence.

We used a multiple-methods approach, which included focus groups, two online surveys, and interviews.[5] In this article, we focus on the results from two online surveys; the first was a survey of workers in the domestic violence sector (worker survey), and the second, a survey of women who had experienced intimate partner stalking (victim survey). We designed the survey questions in consultation with domestic violence crisis workers. The two surveys included closed and open questions, a form of multiple-methods research that captures quantitative and qualitative data (Erickson & Kaplan, 2000).

Our purpose with the worker survey was to discover the practice experiences of workers in the domestic violence sector in Victoria. The worker survey examined

intimate partner stalking in general, technology-facilitated stalking, and workers' experiences of the legal response to stalking.

Based on the results of the worker survey and consultations with domestic violence refuge workers, we developed the survey for victims. The worker survey indicated that many women do not identify stalking behaviors as stalking. Therefore, our aim was to include women who may not have encountered domestic violence services or who may have been unsure whether behaviors they had experienced could be defined as stalking. Therefore, in the recruitment materials, we used the term *unwanted contact* rather than *stalking*, emphasizing that this unwanted contact resulted in women feeling fearful.[6] Some of the survey questions were based on research studies on technology and abuse (Picard, 2007). Convenience sampling was utilized in the research. We advertised the victim survey on the DVRCV website, Facebook, Twitter, and gumtree.com.au, a local classified advertising and community site. In addition, we displayed posters at universities and in health centers. The survey for workers was conducted from August-October 2012, and the victim survey was open from October-December 2012.

We used NVivo to code the answers to the open questions in the two surveys and used thematic analysis to categorize the findings (King & Horrocks, 2010; Saldaña, 2012). Applying the system of thematic analysis as outlined by King and Horrocks (2010), we first coded the survey answers descriptively. Next, we applied interpretive coding to the findings, where meaning was interpreted according to the research question and theoretical framework of coercive control (Stark, 2007). Three interpretive themes emerged in relation to the ways in which perpetrators use technology in the context of domestic violence: (a) to create a sense of omnipresence, (b) to isolate, and (c) to punish and humiliate. These codes were tested for reliability and validity through consultation with workers and researchers in the field of domestic violence. To substantiate the validity of the analysis development, we maintained an audit trail of the research processes.

The final stage of thematic analysis is to define overarching themes (King & Horrocks, 2010). Given that this research was a small-scale scoping study, we identified only one overarching theme from the data. This theme—*control and intimidation*—is the outcome of the various tactics that are used by men, according to the research findings. Although the tools and technologies used by the men were diverse, their tactics were analogous in their impact on the lives of the victims. The women were controlled and intimidated by the men's behavior.

Profile of Participants

In total, 152 workers in the domestic violence sector in Victoria participated in the worker survey. They worked in a variety of roles, including case management, crisis response, housing, and legal support. The average length of time working in the sector was 5.5 years.

In total, 46 women participated in the victim survey. The average age of the women was 35 years. The survey included self-identifying open questions about cultural background, sexuality, family, and disability. Of the participants in the victim survey,

92% (*n* = 42) identified as Anglo-Australian, 91% (*n* = 41) as heterosexual, 9% (*n* = 5) as bisexual, 9% (*n* = 4) as having a disability, and 37% (*n* = 17) as a parent with children.

Results: Contextual Findings

To understand the ways in which technology-facilitated abuse is situated in the context of domestic violence, we included survey questions that would provide us insight into the lives of women experiencing technology-facilitated stalking. In the following section, we present a profile of a woman experiencing technology-facilitated stalking.

The worker survey asked about the types of technologies workers were aware of perpetrators using for the purpose of stalking women in the context of domestic violence. The results showed that the three most commonly used technologies are smartphones at 82% (*n* = 125), mobile phones at 82% (*n* = 125), and social media (such as Facebook) at 82% (*n* = 125). These results correspond with the results of other studies on intimate partner stalking behavior, which have found that women are most likely to be stalked via their phone (McFarlane et al., 2002). However, the high percentage of women being stalked via social media indicates a shift in the methods that perpetrators are using to stalk women. The results of the worker survey indicated that women are being stalked via additional forms of technology, including email at 52% (*n* = 79) and GPS at 29% (*n* = 44).

The victim survey asked participants to select the specific ways in which mobile technologies had been used to stalk them (see Table 1).[7] Their responses show that text messaging is the most common form of technology-facilitated abuse used against women. In a study of intimate partner cyber harassment among college students, Melander (2010) found that young women were receiving excessive numbers of text messages, which they experienced as a form of control.

In the victim survey, participants were asked whether they had experienced other forms of domestic violence in that relationship. The survey findings show that women who experience technology-facilitated stalking are also likely to experience other forms of domestic violence within the same relationship. Eighty-two percent (*n* = 38) of participants had experienced emotional abuse, 58% (*n* = 27) sexual abuse, 39% (*n* = 18) physical violence, and 37% (*n* = 17) financial abuse. These findings are consistent with other studies, which show a link between intimate partner stalking and other forms of domestic violence (Krebs, Breiding, Browne, & Warner, 2011) and between intimate partner stalking and emotionally abusive or controlling behavior (Tjaden & Thoennes, 1998). In addition, emerging research shows a link between stalking and sexual violence (Logan & Cole, 2011).

Participants in the victim survey were asked whether the unwanted contact had affected their mental health and well-being. Of the 39 who responded to this question, 84% (*n* = 33) said it had. Recent U.S. research focusing on the effect of intimate partner stalking on women's psychological well-being found high levels of emotional distress and antidepressant use among women (Kuehner et al., 2012). A large-scale population study conducted in Australia found that stalking is one of the most common

Table 1. Women's Experiences of Stalking Methods Via Mobile Technologies.

	N = 44	
Method	%	n
Used text messages, phone, and so on to call her names, harass her, or "put her down"	78	34
Used mobile technology to check her location	56	25
Made her feel afraid to not respond to a phone call or text because of what the caller might do (e.g., threaten suicide)	56	25
Checked her text messages without her permission	47	21
Threatened her via text, email, and/or social media	44	19
Shared private photographs or videos of her without her permission	39	17
Posted negative information about her on social media (e.g., Facebook)	33	15
Tracked her via GPS (e.g., using applications such as Find My Friends)	17	7
Demanded her electronic password/s	17	7
Impersonated her in emails, text messages, and/or social media	14	6
Used their children's social media accounts to attempt to communicate with her	11	5
Purchased a phone for her for the purpose of keeping track of her	8	4
Gave a phone or other device to their children to create further opportunities to contact her against her wishes	6	3

forms of violence against women and, as with other forms of gender-based violence, stalking affects women's mental health (Rees et al., 2011).

The victim survey included questions about the women's help-seeking strategies. We were careful to phrase these questions to avoid appearing to attribute responsibility to the women. The survey findings show that a woman experiencing technology-facilitated stalking is unlikely to seek help, with 56% ($n = 26$) of participants indicating they had not sought assistance. The main reason women gave for not seeking help was their embarrassment about the abuse, with 85% ($n = 22$) stating they were too embarrassed to seek assistance. This is in line with other studies, which show that many women feel shame about the violence they are experiencing (Fanslow & Robinson, 2004; Logan, Shannon, Cole, & Walker, 2006). This kind of shame is common among victims and is often a significant barrier to seeking help (Rose et al., 2011). In addition, it is important that embarrassment be understood as part of the tactics used by stalkers, who often deliberately isolate and shame women (Fugate, Landis, Riordan, Naureckas, & Engel, 2005). For the 44% ($n = 20$) who said they had sought help, 77% ($n = 15$) had spoken with their family or friends, and 44% ($n = 9$) had spoken with domestic violence services. This is consistent with research conducted by Logan, Shannon, et al. (2006) that found that most women who experience stalking and seek help do so from family and friends, with fewer seeking help from domestic violence services, the police, or legal services.

Tactics Used in Technology-Facilitated Stalking

The material in this section is drawn from the survey responses to questions related to technology-facilitated stalking. The relevant question in the worker survey was, "Could you provide examples that you have encountered in the course of your work of how technology has been used to stalk/harass/abuse women?" In the victim survey, a closed question asked participants about the ways in which a partner or ex-partner had used technology to contact them in a way that had made them fearful (see Table 1). Participants were given the opportunity to provide more details about their experiences if they felt comfortable doing so. Using the statistical findings of the closed questions to guide us to the most significant findings (for example, the high number of women who said that social media was used by perpetrators), we then thematically analyzed the responses to these questions to provide more comprehensive insights into the ways in which stalkers use technology in the context of domestic violence.

Omnipresence

According to Stark (2012), stalking "is the most dramatic form of surveillance used in coercive control . . . [and] falls on a continuum with a range of surveillance tactics whose aim is to convey the abuser's omnipotence and omnipresence" (p. 25). A major theme that emerged from the findings of the SmartSafe study is the way in which perpetrators use mobile technologies to create a sense of being ever-present in the victim's life. Fraser et al. (2010) write that "one of the more terrifying tactics used by stalkers is to make the victim feel that she has no privacy, security, or safety, and that the stalker knows and sees everything" (p. 44). The results from both surveys indicated that perpetrators do use this tactic and that mobile technologies enable perpetrators to be omnipresent in ways not previously possible. This tactic erodes the spatial boundaries of the relationship; although a woman may have physically separated from her partner, she is unable to completely escape his presence in her life (Dimond et al., 2011; Hand et al., 2009).

The results of the two surveys showed that the most common way perpetrators created a sense of omnipresence was via constantly texting and/or phoning their victims. Domestic violence workers reported that constant text messaging and phoning are particularly harmful to victims, because these behaviors create the feeling that she cannot escape the perpetrator. One worker wrote, "Texting is a big problem. The ease of access means that even if someone can remove themselves physically from an abusive situation, it is very hard for them to remove themselves psychologically."

The way in which technology enables this ease of access is highlighted by Hand et al. (2009) who argue that spatial boundaries of security for women leaving domestic violence have shifted due to the global reach of mobile technologies. Workers specifically mentioned that perpetrators know women have their phones with them at all times and are abusing them with text messages 24 hr a day:

> The concern is that with mobile technology, stalking can occur 24 hours a day no matter where the person is. For one of my clients with an intellectual disability, having messages left on her phone or even missed calls was distressing to her because it brought the situation into her mind repeatedly and she was upset whenever her phone rang.

Victims, too, wrote of the effect of constant text messages and of the consequent feeling of being trapped: "My ex would text me over 50 times a day and would make me feel like I was constantly under surveillance. He stalked me for a year after I left him." Another victim wrote, "He would constantly text me to check up on me during our relationship. This behavior escalated when we broke up. I would get over 100 abusive texts a day—I never felt free of him."

An additional key finding was the use of GPS mobile technology to engender this sense of omnipresence. Perpetrators usually achieve this by downloading mobile applications ("apps") to women's phones or hiding a GPS device in their vehicles. A participant in the worker survey illustrated the numerous ways in which perpetrators use GPS:

> A past client was under a great array of electronic surveillance. Her ex-partner had installed a tracking device in her car and would text her and let her know that he was aware of her location. She had the GPS disabled on her phone, but this persisted. Also, after engaging a person to repair the front gate, it was discovered that her ex-partner had installed covert cameras both in the home and at the front gate that he had linked to his computer.

Evidently, in the above example, the perpetrator wanted the woman to know that she was under surveillance. Stark (2012) asserts this is a key tactic men use to intimidate and instill fear. Some perpetrators were overt about their tracking, but some participants in the victim survey wrote of suspecting they were being covertly monitored:

> I suspect he may have installed software onto my iPhone enabling him to have access to my phone calls, text messages, Facebook, e-mails, etc. He sometimes says things or behaves in ways that suggests he knows something via a suspicious means.

Being under surveillance can make it difficult for women to leave the relationship safely. One victim wrote, "My ex used to track me with GPS; I felt afraid to tell him to stop doing this. This made it so hard to leave him." Although disenabling location tracking or removing GPS devices may appear simple solutions to this form of surveillance, doing so can often be dangerous for women because it can alert the perpetrator to the possibility that she is leaving the relationship. According to Fraser et al. (2010), disenabling location tracking can increase the risk of an escalation of violence as the abuser attempts to regain control over the victim.

Perpetrators use additional forms of technology to track women and generate the impression that they know and see everything. Workers and victims wrote of perpetrators using social media, specifically Facebook, to relentlessly monitor and abuse women. Even when a woman blocks her partner or ex-partner from her Facebook

account, he may continue to monitor her through the Facebook pages of shared friends, family, or even their children.[8] One worker wrote, "I have had two clients who have relocated and changed their names but [who] have still been found by [the perpetrator] stalking the client's friends on Facebook."

Facebook's focus on creating friendship networks enables perpetrators to track women through friends and family, particularly when friends tag women in photos or at events. According to one worker:

> Women "check in" on Facebook so others can see where they are at any given time. People tag these women in photos or at events so that others can see where they are [and] what they are doing. Stalkers can follow friends, family, and acquaintances, so that even if the women are not friends with them [the stalkers], they can still see what they are doing.

Workers identified Facebook as a platform that perpetrators use to proxy stalk women. *Proxy stalking* refers to a perpetrator using other people to contact the victim (Melton, 2007). One worker wrote, "Offender and his family members are using social media to keep up to date on partner and children." Participants in the victim survey noted that perpetrators were using other forms of proxy stalking; for example, several women mentioned receiving constant text messages from the perpetrator's family and friends. This may heighten a woman's feelings of isolation by conveying the impression that the perpetrator does not need to be present to control her; he can monitor her via other people and, in so doing, create the impression that no matter where she goes, she will not be safe from him. Melton (2007) argues that a woman may find proxy stalking more terrifying than other forms of stalking because it involves numerous people following and tracking her.

Isolation

Stark (2012) argues that perpetrators isolate a partner to instill dependence, to monopolize their time, and to prevent them from getting help. Perpetrators isolate victims from their support systems by abusing and harassing the victim's family, friends, and coworkers; restricting the victim's contact with others; and embarrassing the victim in front of family and friends (Stark, 2012). This isolation often results in victims having little or no support systems (Arnold, 2009). Logan and Walker (2009) state that stalking can create various forms of social isolation; for example, women may need to relocate or change their employment to avoid stalkers. The authors also note that a stalker can sabotage, directly or indirectly, a victim's relationships with others.

The use of isolation to control and intimidate women emerged in the SmartSafe study. Perpetrators use technology to isolate women from their support systems through either direct or indirect harassment of friends and family. Direct harassment includes means such as text messages, phone calls, and Facebook. Indirect harassment includes women changing their phone numbers, closing their Facebook accounts, or relocating due to the constant abuse.

The surveyed workers wrote of the effect on victims' lives of changing their phone numbers: "Women who change their phone numbers to prevent perpetrators contacting them disadvantage themselves to services because they become uncontactable, e.g. to be notified regarding housing offers, etc." This is significant because women who are being harassed via their mobile phones are often advised to change their mobile phone number. However, to do so can result in a significant increase in the social isolation many women experience during domestic violence (Fraser et al., 2010). One victim wrote,

> I tried to block his number, but I didn't want to change my number, as I didn't want him to impact me in that way. Eventually, I did have to change all my numbers, which was sad, but I couldn't take it any longer.

Victims also wrote of having no choice other than to relocate to escape the perpetrator: "He harassed my family to try to find me with constant phone calls, but I have moved states (losing contact with most of my supports) to be free of him." Another victim wrote, "My partner used to call my family to leave threats, ask questions, etc. He would sit outside my house [and my] work until I got him arrested. I have had to move states just to feel safe."

One surveyed worker described the lengths a perpetrator went to in an attempt to maintain control over a victim and the way in which technology assisted this abuse:

> My client fled from another country to Australia due to domestic violence, but her ex-partner located her through Facebook and began sending threatening messages to her in Australia. He migrated to Australia to continue harassing, stalking, and abusing her. He gained access to her mobile phone in order to monitor her contact with services, friends, etc.

This worker's story clearly illustrates the possibilities mobile technologies offer perpetrators. The potential for global reach is evident, and the effect on the woman's life was multi-faceted; not only could she not escape him (he was able to track her internationally) but also he was able to control and isolate her, monitoring her contacts and abusing her friends and family.

The way in which perpetrators use social media, such as Facebook, to publicly harass women and the effect this has on women's social networks was emphasized by the surveyed workers. One wrote, "Facebook and Internet stalking and abuse have increased. Things are being posted online about women, such as rumors or allegations and they [are] unable to defend themselves. They lose a lot of social supports through this process." The intent appears to be to damage women's relationships with others and to embarrass women, which Stark (2012) argues is a key tactic perpetrators use to isolate women and control them. This can also be seen in a surveyed worker's account of a perpetrator using Facebook to locate a victim and impersonate her:

> My client's ex-partner has tracked her down after following her Facebook use. He assaulted her, stole her phone, and accessed her Facebook [account]. He has changed her

passwords, and she is now not able to access her own account. He is contacting all her friends and supports, pretending to be her. This has resulted in her becoming very isolated. He has allegedly sent sexual messages to male friends in her account, resulting in the client feeling ashamed and powerless. The client has reported the incident, but police have not been able to find the respondent.

As the worker notes, the powerlessness of the victim to stop the public harassment is not only isolating but also shaming. The perpetrator appears intent on disconnecting the woman from her social supports. This example highlights the ease with which this can be achieved through social media.

Punishment and Humiliation

The third major theme that emerged from the research findings is the use of technology to punish and humiliate. Stark (2012) writes that perpetrators often say or do things in a public setting to insult or embarrass victims, usually as a tactic to silence them. An intimate partner stalker often knows his victim's greatest fears, concerns, and secrets, and uses this knowledge to punish, torment, and humiliate her (Logan, Walker, Cole, & Shannon, 2006). Perpetrators have long used this tactic, but mobile technologies enable them to use it with ease and immediacy—broadcasting humiliating content to friends, family, and the community (Fraser et al., 2010).

Participants in both surveys reported the use of technology to share sexualized content as a tactic perpetrators use to humiliate women. Participants provided numerous examples of non-consensual sexting. One victim wrote, "He must have set up cameras somewhere in the house, as he had naked photos of me that he threatened me with." Another woman was threatened with the release of images, which she was unsure actually existed: "Secretly filmed things (possibly) and threatened to send them."

As discussed, some of the women who participated in the victim survey were not only victims of stalking but also of other forms of domestic violence, such as sexual abuse. In the case of one woman, her partner recorded the sexual abuse and used the videos to threaten her: "Most of the abuse I experienced was of a sexual nature, and this abuse was often filmed on his phone; he would threaten that he would send these videos to my family." Another victim was threatened with sexual violence via text messages: "Much of the texts were threatening, [e]specially regarding sexual things, which was particularly painful and shameful."

Surveyed workers noted that some perpetrators take images or videos of their victim and use these as a means of intimidation. One worker wrote that perpetrators were "taking illicit photos and using them against women at difficult times in their relationships/or at the end of relationships." Another worker listed some examples she had observed in her practice: "Video cameras have been hidden in a bathroom or bedroom. Videos taken when unaware and put on YouTube. Recording sexual activities and then threatening to post or actually posting them online."

The research shows that perpetrators are using Facebook to humiliate women publicly, posting sexual images and videos where the women's friends, family, and children can view them. One worker wrote, "Social media sites provide an avenue for men to denigrate women via the viewing and sending on of pornography, which his partner and her friends can see." Another commented, "A video of the victim doing a seductive dance was shown to her children by her ex and used to degrade her to them via Facebook." One surveyed worker explained that a victim's ex-partner was using Facebook to humiliate her in front of her children and their friends:

> Women are having their Facebook page hacked into and nasty things written about and to them. One particular woman had her ex-partner saturate her page with information about how he gave her an STI—this information was read by her teenage son's friends, among other people.

Perpetrators also use Facebook to publicly shame victims and punish them for any perceived wrongdoings. A surveyed worker wrote, "Many situations I have encountered have involved men monitoring women's status updates on Facebook and using this information to inflict injury on women or in their mind 'punish' them for their transgressions."

Social networking sites can allow perpetrators to intimidate victims publicly, where shared friends and the community may support him and participate in the abuse:

> Social networking sites are being used quite a bit. Sometimes it will be a "status update" blaming his problems on her, or calling her names and accusing her of embarrassing shameful behavior. It seems that the truly hurtful aspect of this is the "comments" of support to him from family and friends that leave the victim feeling like she is being ganged up on by an entire community. This is incredibly intimidating.

Social media provides a public platform, affording the perpetrator an audience where he can torment the woman in front of her community of friends, extended family, and children.

Discussion and Conclusion

The central aim of the SmartSafe study was to examine whether mobile technologies present additional opportunities for the perpetration of stalking and domestic violence against women. The findings confirm that mobile technologies are used by perpetrators to stalk and harass women in the context of domestic violence.

However, several limitations of this research must be noted. The sample sizes were small, particularly the sample of victims. The sample used for the research was non-representative and non-random, and the recruitment method may have resulted in selection bias. In addition, a large majority of the victims identified as Anglo-Australian and, as such, this sample was not culturally representative. In consultations, domestic violence refuge workers revealed that women from non-English speaking backgrounds

are particularly vulnerable to technology-facilitated stalking. However, this group did not participate in the research. Another limitation is that workers, while important sources of information, may not recall events accurately.

This study was based on two small, localized samples of domestic violence workers and victims. There is increasingly widespread use of mobile technologies, particularly in developing nations (International Telecommunication Union, 2012). This trend, coupled with evidence that one third of women across the globe experience domestic violence, indicates that the findings from the SmartSafe study are not unique (World Health Organization, 2013).

Mobile Technologies: 24-Hr Access

Through text messages, phone calls, GPS tracking, and social media, perpetrators use mobile technologies to stalk women, creating a sense of omnipresence and eroding women's feelings of safety after separation. Perpetrators know that women have their phones with them day and night, and they use this knowledge to harass and abuse the women from a distance—easily, instantaneously, and repetitively. The sending of constant text messages may seem a trivial act, but the effect on women's lives of receiving such messages is significant. In this study, victim participants wrote of feeling that they could never be free of their ex-partner, that he could reach her at any time, anywhere.

Omnipresence as a controlling tactic is common in coercive control. Technology provides not only more opportunities to use this tactic but also a larger range of methods, some of which facilitate abuse. Ringrose et al. (2012) argue that technology is not neutral, and the evidence gathered in the SmartSafe study shows that certain features of technology aid abusive and controlling behavior. Examples include the ease with which a perpetrator can use the GPS feature on his smartphone to track his partner or ex-partner without her knowledge; use Facebook to monitor her, her friends, and her family; or repeatedly send abusive text messages, which are difficult to block.

Perpetrators Use Technology to Isolate Women From Their Support Systems

Technology-facilitated stalking has wide-ranging implications for victims; women often have to change phone numbers, close Facebook accounts, and relocate to another state or country. Changing a phone number or closing a Facebook account may seem minor inconveniences, but when situated in a pattern of coercive control, they are further consequences of the tactics perpetrators use to isolate and intimidate women.

Isolation from family and friends and a lack of social supports after a traumatic experience are linked with higher levels of psychological distress (Logan & Walker, 2009). Isolation also contributes to depression and suicidal behavior in victims (World Health Organization, 2013). When planning safety strategies for women, it is important

to be mindful of the possible consequences of social isolation and to work with women to ensure that their safety needs are balanced carefully with the potential for further isolation.

Perpetrators Use Mobile Technologies to Punish and Humiliate Women, Often in Sexualized Ways

Intimate partner stalkers often use their knowledge of the women to shame and humiliate them. With mobile technologies, perpetrators can broadcast embarrassing and demeaning content to friends, family, and the community—easily and publicly. By threatening to release the material, intimate partner stalkers control and intimidate women, an extremely fear-inducing situation for their victims. Social media platforms, such as Facebook, provide perpetrators with public platforms to threaten and abuse their victims, sometimes with family members and friends participating in the harassment.

The sexualized nature of technology-facilitated stalking can be considered a form of sexting. Sexting is usually placed in the context of the "sexualization of culture," described as the saturation of sexual imagery and messages in society, particularly those sourced from pornography (Ringrose et al., 2012). Concerns about sexualization center on the effects on young people. Although sexting is largely understood to occur among young people, the average age of the women who participated in the SmartSafe study was 35. The findings of this study suggest that non-consensual sexting should be considered a form of coercive control and be placed in the larger context of men's violence against women.

Mobile technologies can be useful for women experiencing violence, connecting them with assistance and enabling contact with their support networks. However, this research shows that these technologies also provide more opportunities for perpetrators to control, stalk, and abuse women in the context of domestic violence. If women are to use mobile technologies safely, technology-facilitated stalking needs to be treated as a serious offense, and effective practice, policy, and legal responses must be developed to address the use of technology as a tactic for abuse. The DVRCV is continuing advocacy in the area of technology-facilitated abuse through the training of domestic-violence workers and legal professionals, lobbying the communication industry, contributing to legal reforms, and developing technology safety resources for victims.

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Notes

1. The first anti-stalking law was introduced in California in 1990 and, following this, similar legislation has been introduced throughout North America and much of the Western world, including Australia (McEwan, Mullen, & MacKenzie, 2007; NSW Law Reform Commission, 2003).
2. The term *victim* is used for simplicity. However, this term has limitations. Commentators have identified that the term *victim* inadequately conveys resistance to violence (Gavey, 2005), whereas the term *survivor* fails to encompass the experiences of women who do not survive men's violence (Graham, 1994).
3. Tagging someone on Facebook creates a link to that person's timeline. For example, a friend may tag a person in a photo; this action then indicates who is in the photo and links to that person's Facebook timeline.
4. This line of inquiry is influenced by Hand, Chung, and Peters (2009) who argue that the use of technology by perpetrators is not a new form of violence but rather that technology provides more extensive opportunities for the control and harassment of women.
5. Research conducted at the DVRCV is guided by internal policies and consultation with external experts to ensure that international ethical standards for working with victims of domestic violence are followed (Garcia-Moreno, Heise, & Ellsberg, 2001).
6. This follows a similar approach taken by Logan, Walker, Cole, and Shannon (2006) in their research on intimate partner stalking.
7. Women could choose more than one answer for this question and, if they preferred, could skip the question. Two participants skipped the question.
8. See also Dimond, Fiesler, and Bruckman (2011).

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