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Protecting Women's Safety?

The use of smartphone 'apps' in relation to domestic and sexual violence

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1. Key Points

- The intersection between technology and domestic and sexual violence is an important and growing research area.

- This research consisted of a systematic app search plus interviews with app developers and practitioners in the area of domestic and sexual violence.

- The most common app function was a panic alarm/ danger alert, requiring women to take actions to 'keep themselves safe' and contributing towards the commodification of women's safety.

- Practitioners saw some value of information and evidence gathering functions but had safety concerns relating to

their use by domestic violence victims still living with the perpetrator.

- Advances in mobile technology are opening up new weapons of abuse.

- It is recommended that evaluation be built into apps, that app developers give more consideration to the claims they make in their marketing and to give greater consideration to the ways their apps could be used in harmful ways, and that future apps include domestic and sexual violence practitioners as advisors at the development stage.

2. Background

An 'app' is a small, specialised software program, downloadable and installable onto mobile devices such as smartphones or tablet computers.

Apps are frequently designed to serve users with similar services to those that they may access on their home computers - often with limited functionality but benefiting from ease of access and simplicity of use. The use of apps has been popularised by Apple's 'App Store' and also by Google's 'Play Store'.

Violence against women is a global public health problem; with 35% of women worldwide experiencing physical and/or sexual intimate partner violence or non-partner sexual violence (World Health Organisation, 2013).

The impact of this violence, includes: death and injury; depression; alcohol use problems; sexually transmitted infections; unwanted pregnancy and abortion; and low birth-weight problems (World Health Organisation, 2013). New technological developments complicate how women experience violence (Mason & Magnet, 2012). On the one hand, the Digital Age may assist domestic violence victim-survivors in their quest for safety (Dunlap, 2012). However, the same advancements may also allow perpetrators to adapt and/or escalate their offending behaviour (McCartan & McAlister, 2012; Dunlap, 2012). In a US study on domestic violence and information technology, Dimond et al (2011) found that users of mobiles and social networks were making trade-offs between potential harm (e.g. continued abuse) and benefit (e.g. support).

Worldwide, the sales of new smartphones are forecast to reach 700 million by 2015 (Portio Research, 2011). In the UK, 92% of adults personally own or use a mobile phone and 39% use their mobile handset to access the internet (Ofcom, 2012). Furthermore, 40% of UK adults own a smartphone, and tablet ownership jumped from 2% to 11% in just 12 months (Ofcom, 2012). Based on the advanced mobile and software capabilities, the smartphone has become a ubiquitous everyday communication device, offering access to powerful computational software that is often multiplatform and sensor rich (Denison et al. 2013). In the general population, people are increasingly utilising and relying on technology to enhance both their professional and personal lives. These factors combined, make the intersection between technology and domestic and sexual violence an important and growing research area.

3. The study

The aim of this study was to explore the use of smartphone applications ('apps') in relation to domestic and sexual violence. The data collection consisted of three stages:

- A systematic search for smartphone applications through website search engines and mobile phone app stores. These included, Google, Apple app store, Google Play for Android and Blackberry World.

- Ten interviews were conducted with smartphone app developers involved in the development of relevant apps. The interviews centred on the developers' motivation and concept of their smartphone app to protect potential victims of domestic abuse and sexual violence, as well as the context for the features, capabilities and potential limitations. Interviews were held with companies in Australia, India, United Kingdom and USA.

- Seventeen interviews with practitioners dealing with domestic and sexual violence (including police, women's support organisations, victim support organisations, perpetrator organisations, and women's campaign and coordination groups) from England, Scotland, Canada, New Zealand and Iceland. Each interview lasted around forty minutes and covered interviewees awareness and ideas in relation to domestic and sexual violence victim survivors, perpetrators and campaigning.
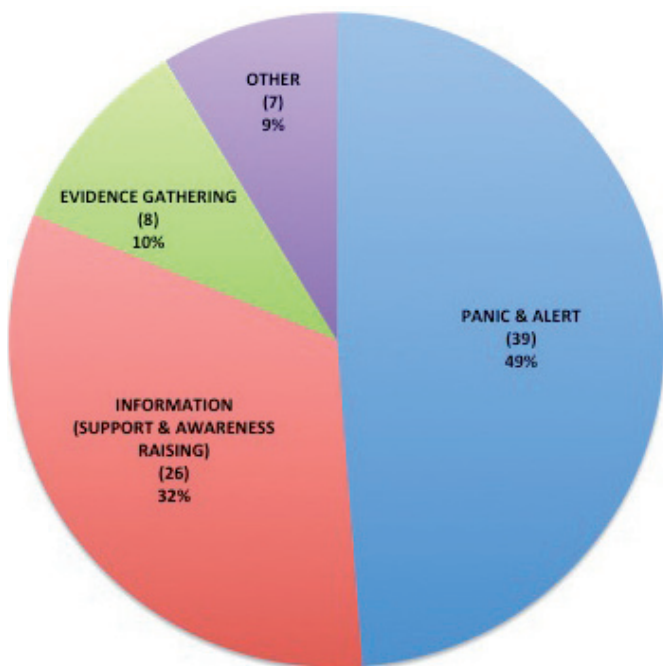
4. Findings

When coded by main function/s, it was found that nearly half of the apps (49%) provided some form of 'panic alarm/ danger alert' system.

This was the largest category. The second largest category was information (either information about support services available or awareness raising information about domestic and/or sexual violence). One in ten apps offered some form of evidence gathering function, for example being able to voice record and store or send evidence to solicitors or the police. Finally, a small selection of apps did not fall into any of these categories and are grouped together in the pie chart as 'other'.

Figure 1. Pie-chart of apps coded by primary functions

Finding 1
The most common app function was a panic alarm/ danger alert, requiring women to take actions to 'keep themselves safe' and contributing towards the commodification of women's safety.

Some of these apps were basic 'panic button's which – similar to non electronic panic or rape alarms – emitted a very loud noise designed to attract attention to themselves and thereby scaring the potential offender away through fear of being caught (e.g. Attack Alarm, Scream Alarm, iPhone Panic Alarm). Most, however, offered additional functions. Figure 2 shows an example of this – Red Panic Button costs $2.99 (with the option to buy extras within the app), was developed by a UK based company, and has won an 'app of the day' award. It offers an SMS, email, twitter, and/or facebook panic message to be sent at the press of the Red Panic Button, which sends the

user's current location coordinates. It also offers an emergency dial function that can be customised. In its description it describes itself as an 'Early Warning and Vulnerability Alert System' and makes grand claims such as 'The one call that can make a difference!', 'Get out of harm's way with just one touch!', In an emergency, information means survival', and even 'Red Panic Button is your lifeline!'.

Figure 2: Red Panic Button

Many of the practitioners we interviewed had not heard of any apps specifically designed for domestic and sexual violence. Out of those that had heard of an app, this was most likely to be Circle of Six – shown in Figure 3.

Figure 3. Circle of Six

Circle of Six is a free app, originating in the US and recently launched in India. It has won a number of awards, including the White House/HHS Apps Against Abuse Technology Challenge, and is publicly endorsed by US Vice President Joe Biden. It markets itself as an app that 'prevents violence before it happens' and asks its users to take its Facebook pledge 'I won't let violence happen in my circle'. Circle of Six is so called because it requires users to choose and then add the contact details
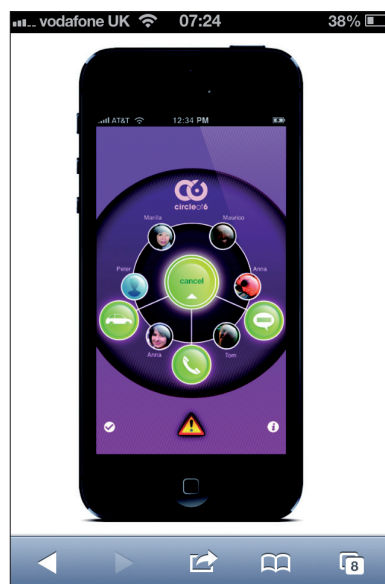
of six friends that the user most trusts and feels they can rely upon. At any point that the user feels threatened or at risk, they can choose to send an automated SMS message, for example 'Come and get me. I need help getting home safely' which is then sent to the circle with a map using GPS to show people in their circle where they are. A similar 'phone me'

message is available, and national support organisations are also pre-programmed. An 'I need some advice' chat icon is also available that informs circle friends that they are looking up information about healthy relationships and respect but that immediate action is not needed - 'Just letting you know.'

Practitioners were largely critical of panic alarm/danger alert style apps, feeling they did not really 'add' anything – that a quick text to the same effect could easily be sent or information quickly searched for online. They were also concerned that apps may reinforce 'victim blaming' attitudes that excuse or exonerate perpetrators actions.

'I don't believe apps are the way we should be dealing with sexual violence or domestic violence; using apps to minimise behaviour may perpetuate the myth that it's the women's responsibility to stay safe.'
(Vancouver Rape Relief and Women's Shelter)

Furthermore, such apps require women to do what Kelly (2013) calls 'Safety Work', by which she means they are expected to invest time, energy, and (sometimes) money into 'keeping themselves safe'. Some may also perpetuate 'stranger danger' myths that mask the prevalence of violence within existing relationships. Such apps, while clearly far more sophisticated than 'old style' panic alarms and designed with the best of intentions may, we argue, contribute to victim blaming, reinforce 'stranger danger' panics, and increase the responsibility felt by victims to keep themselves safe. In this way, and because of the proportion of apps that are designed with this function with no evidencing of their bold claims, we argue that this category of apps contributes towards the commodification of women's safety.

Finding 2
Practitioners saw some value of information and evidence gathering functions but had safety concerns relating to their use by domestic violence victims still living with the perpetrator.

A third of the apps contained some form of information, for example facts about domestic violence or information about how to contact the nearest support service.

For example, an app by Rape Crisis Ireland offers information about what to do if you or a friend has been raped, and also provides a map of Rape Crisis Centres (see Figure 4). A particularly innovative app still in development (Trigger Free) is designed to allow survivors to easily find information about whether films to have 'triggering' content that might create anxiety, flashbacks, or panic attacks.

Figure 4. Rape Crisis Ireland

One in ten apps offered a way of gathering/storing evidence, for example the ability to voice record an incident and send it to a secure online storage area or to a person or organisation. For example, the Self Evident app markets itself as '… the smart way to report crime and provide evidence to the police' and enables victims and witnesses to record and store evidence in 'real time'.

While some practitioners could see benefits of apps such as these, they expressed concerns about the safety of women using them when they were still in a relationship with the perpetrator. Perpetrators often check their partner's mobile phone and social media sites as a form of 'controlling surveillance'. As one practitioner who works with domestically violent men put it - *'Phone checking is a big thing for perps'*. Another interviewee highlighted the overlaps with hard copies of information:

'My concern about the whole debate is the idea that women have private and unrestrained access to their mobile phones, and this is a false one. So, having an app on your phone is the same as having the local women's aid card in your phone - you're asking a woman to make a risk assessment about whether it is safe to do so.'
(Scottish Women's Aid)

Some of the apps were disguised as other, more generic, non-violence and abuse related apps and others allowed the app to be hidden in different ways. However, a perpetrator could still find these. A minority of app developers were aware of the consequences of this. For example, the interviewee from Self Evident explained that they did not provide a 'hide' function as they did not want to provide a 'false sense of security'. Self Evident in particular were critical of apps that made grand claims around safety and felt app developers should be cautious about implementing any features that could unrealistically raise expectations in regards to safety.

Therefore, apps may be more appropriately focused at those whose domestic violence relationships have ended and who want information, support or to evidence continued violence, abuse and harassment or in sexual violence cases where the perpetrator does not have continued access to/control over the victim and her belongings.

Finding 3
Advances in mobile technology are opening up new weapons of abuse.

There are a range of apps being used by domestic violence perpetrators in particular to extend their net of power and control. Most of these are general ones, but we found a small number that were specifically designed to support the surveillance of women. The app we had most concerns about was one called 'Track your wife' (see Figure 5). This is a discreet application, which means that it covertly runs in the background of the mobile device that it is installed on. The app frequently sends geo-location and time data from Google Maps to a linked website to enable account holders to know the location of the phone, and by implication, 'their wife'. As of July 2013 this app had over 10,000 installs.

Figure 5. Track Your Wife
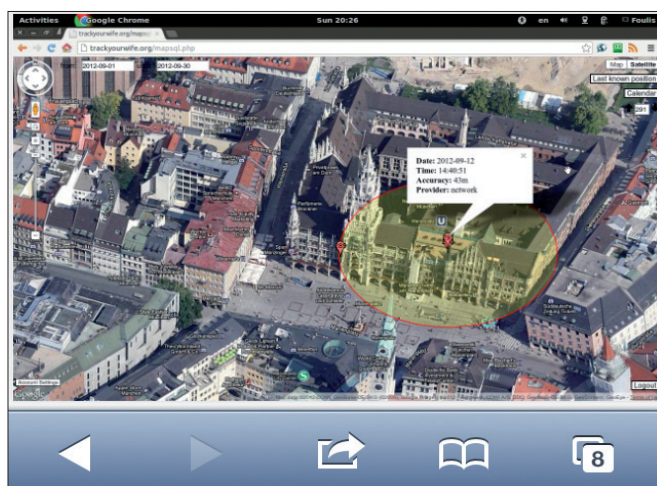
Examples were also given by practitioners of ways that perpetrators were extend their power and control via more generic apps e.g. the facebook app, and sleep apps that were instead used to monitor their partner's activities while the perpetrator was absent. These more general apps and social media sites will be considered in more detail in a wider programme of research on violence and technology.

5. Conclusions

This was a short study with a relatively small number of participants. It is intended more as a tentative 'starting point' than a conclusive review. Many of these apps are very young and still being developed. For example, we know of no criminal cases yet that has relied on evidence gathered through an app. Similarly, the practitioners had not worked with any women that said they had used a domestic or sexual violence app. It is recommended that some form of evaluation be built into these apps (beyond simply the number of downloads). It is also recommended that app developers give more consideration to the claims they make in their marketing and to give greater consideration to the ways their apps could be used in harmful ways. Finally, there was openness from both app developers and from practitioners to working together to ensure the development of safe, effective apps, and it is recommended that future apps include domestic and sexual violence practitioners as advisors at the development stage.

6. References

Dennison, L., Morrison, L., Conway, G., & Yardley, L. (2013). Opportunities and Challenges for Smartphone Applications in Supporting Health Behavior Change: Qualitative Study, *Journal of medical Internet research*, 15(4): e86.

Dimond, J.P., Fiesler, C. and Bruckman, A.S. (2011). Domestic violence and information communication technologies, *Interacting with Computers*, 23(5): 413-421.

Dunlap, J.A. (2012). *Intimate Terrorism and Technology: There's an App for That*, 7 U. Mass. L. Rev. 10.

Kelly, L. (2013). *Thinking in 10s: what we have learnt, what we need to know and do,* inaugural lecture at the launch of the Durham Centre for Research into Violence and Abuse, Durham University, 16th May 2013.

Mason, C. and Shoshana Magnet. 2012. Surveillance Studies and Violence Against Women. *Surveillance & Society* 10(2): 105-118.

Elliott, J. and McCartan K. (2013). The Reality of Trafficked People's Access to Technology. *The Journal of Criminal Law* 77(3): 255-273.

Ofcom (2012). *Children and Parents: Media Use and Attitudes Report,*

Portio Research (2011). Portio research mobile factbook 2011. Chippenham, UK. Retrieved from http://www.portioresearch.com/Portio%20Research%20Ltd%20 Mobile%20Factbook%202011.pdf

World Health Organisation (2013) *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence*, Geneva: World Health Organisation.

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