



Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

TARZIA, L;Iyer, D;Thrower, E;Hegarty, K

Title:

“Technology Doesn’t Judge You”: Young Australian Women’s Views on Using the Internet and Smartphones to Address Intimate Partner Violence

Date:

2017

Citation:

TARZIA, L., Iyer, D., Thrower, E. & Hegarty, K. (2017). “Technology Doesn’t Judge You”: Young Australian Women’s Views on Using the Internet and Smartphones to Address Intimate Partner Violence. *Journal of Technology in Human Services*, 35 (3), pp.199-218. <https://doi.org/10.1080/15228835.2017.1350616>.

Persistent Link:

<https://hdl.handle.net/11343/297296>

'Technology doesn't judge you': Young Australian women's views on using the internet and smartphones to address intimate partner violence

Laura Tarzia¹, Deepthi Iyer¹, Emily Thrower¹ and Kelsey Hegarty¹

¹The University of Melbourne, Victoria, Australia

Abstract

Intimate partner violence (IPV) is a pervasive social issue. Younger women tend to experience the highest rates of violence, associated with a range of negative health outcomes. Although interventions in health settings have shown promise, younger women may be reluctant to access services or discuss relationships with a health professional. Delivering an IPV intervention online or via a smartphone has the potential to overcome some of these barriers. Little is known, however, about how young women might perceive such an intervention, or what factors might influence its uptake. Drawing on focus groups interviews, we explore the views of young Australian women on using a website or app to address IPV. Azjen's Theory of Planned Behaviour is used to help understand the beliefs and norms around technology and help-seeking for IPV. Findings highlight the potential for technological interventions to become a valuable addition to the resources available to young women.

Keywords: young women; intimate partner violence; online intervention; e-health; Theory of Planned Behavior

Introduction

Intimate partner violence (IPV) is a global social problem that disproportionately affects women (World Health Organization, 2013). One in three women worldwide report physical or sexual violence by an intimate partner, including intermittent acts of physical aggression; ongoing psychological abuse and humiliation, stalking, cyber bullying, forced intercourse and other forms of sexual coercion and pervasive controlling behaviours. In Australia, the Personal Safety Survey estimates that at least 1 in 5 women have experienced violence from their partner since the age of 15, with the highest rates in young women aged 18 to 24 years (Australian Bureau of Statistics, 2013). Figures are likely to be even higher than reported as the Personal Safety Survey excludes boyfriends, girlfriends and other dating situations in its definition of 'partner'.

IPV is a leading cause of death and morbidity in women of childbearing age (Vos et al., 2006) and a primary reason for women's lack of participation in work (Swanberg & Logan, 2005) and other social activities. In young women, it is associated with a range of negative physical and emotional health outcomes (World Health Organization, 2013) including risk-taking behaviour and mental illness (Bonomi, Anderson, Nemeth, Rivara, & Buettner, 2013; Exner-Cortens, Eckenrode, & Rothman, 2013; Silverman, Raj, Mucci, Lorelei, & Hathaway, 2001).

Despite the strong links between IPV and poor health, there is limited evidence around how to best intervene and respond to women experiencing IPV in health settings (Bair-Merritt et al., 2014; Feder, Hutson, Ramsay, & Tacket, 2006; Ramsay et al., 2009). Interventions thus far have primarily focused on screening or early identification, and referral to formal services (Taft et al., 2013). However, uptake of referrals by women is generally shown to be quite low (Taft et al., 2013). Young people in particular often choose not to seek help through formal channels, preferring the support of friends and family, who may not be informed about what support is available (Ashley & Foshee, 2005; Black, Tolman, Callahan, Saunders, & Weisz, 2008; Fry et al., 2014; Martin, Houston, Mmari, & Decker, 2012). The response from family and friends can also vary according to a woman's socioeconomic status, religion, or ethnicity (Brabeck & Guzman, 2009; Sullivan, Bhuyan, Senturia, Shiu-Thornton, & Ciske, 2005).

Although there is evidence that theoretically-informed, woman-led counselling interventions in health settings may be effective (Garcia-Moreno et al., 2015; Hegarty et al., 2013), there are barriers to identification and response that may limit engagement by women.

These include stigma, reluctance to identify as a 'victim' (Zink, Jacobson, Regan, & Pabst, 2004), fear of being judged or misunderstood (Hegarty & Taft, 2001; Martin et al., 2012), discomfort talking to the health practitioner (O'Doherty, Taft, McNair, & Hegarty, 2016), time constraints, or concerns about confidentiality (Feder et al., 2006). Rural or disadvantaged women and women with disabilities may face additional barriers to disclosure due to distance, economic factors, or physical limitations. Thus, critical internal and external factors may play a large part in help-seeking, irrespective of the behaviour and response from health professionals (Cluss et al., 2006; May et al., 2014).

Recent research suggests that technology such as the internet and smartphones are increasingly being used by young people to access health information (Ellis et al., 2013; Rideout, 2002), and may have the potential to help young women experiencing IPV (Glass, Eden, Bloom, & Perrin, 2010; Koziol-McLain et al., 2015; Lindsay et al., 2013). Young people, in particular, may prefer the control they have over online communication and enjoy the supposedly equal power dynamics and anonymity when discussing sensitive issues such as depression (Moreno et al., 2011). Although specific research on the use of technology in IPV interventions is limited, online interventions have showed promise in the context of chronic disease self-management (Free et al., 2013; E. Murray, 2012; E. Murray, Burns, See Tai, Lai, & Nazareth, 2005), stigmatised mental health conditions (Berger, Wagner, & Baker, 2005), and sexual health interventions (Bull, Levine, Black, Schmiede, & Santelli, 2012; Guse et al., 2012; Lim et al., 2011). Alcohol interventions for young people delivered online have also demonstrated positive effects on problem drinking (Tait & Christensen, 2010)).

A major benefit of offering an IPV intervention via technology such as the internet is its accessibility and constant availability. Similar to the US and the UK, access to the internet in Australia is widespread, with over 80% of households (95% with children under 15 years) having an internet connection (Australian Bureau of Statistics, 2014) and 11.19 million people using a smartphone (Australian Communications and Media Authority, 2013). Young people in particular are heavy users of technology, with the majority (74%) of Australians in the 18-24 year age group owning a smartphone (Australian Communications and Media Authority, 2013) and young people aged 16-24 in the UK spend an average of 27 hours per week online (Ofcom, 2015).

In theory, transitioning elements of face-to-face IPV counselling interventions into an online format may be effective in facilitating positive change for safety and wellbeing (Tarzia et al., 2015), however, little is known about how young women living with IPV might perceive such an intervention, or why they may or may not choose to use it. To our knowledge, only one study exists (Lindsay et al., 2013), conducted in the US focusing primarily on the specific elements of a prototype smartphone application, although the idea of using technology to address IPV was supported more broadly by the participants. This paper attempts to address this gap by reporting qualitative data from focus groups with young Australian women who had experienced IPV or fear of a partner. The paper explores women's views about using technology such as the internet or smartphones to address IPV and to facilitate help-seeking, as well as the essential elements they thought technology-based interventions should contain.

We draw on the Theory of Planned Behaviour (TPB) (Ajzen, 1991) to assist our analysis. The TPB has been widely used as a theoretical framework for designing online (ehealth) and mobile-phone (mhealth) interventions that aim to change health behaviours (e.g. smoking, physical activity) (Webb, Joseph, Yardley, & Michie, 2010). Although it is not commonly used in this way in the context of IPV (due to the fact that it assumes a level of agency that abused women often do not have), it has been used in analysis of factors influencing *uptake* of face to face IPV interventions (O'Doherty, Taket, Valpied, & Hegarty, 2016). The TPB proposes that behaviour is guided by beliefs about the likely consequences or other attributes of the behaviour (behavioural beliefs), beliefs about the normative expectations of other people (normative beliefs), and beliefs about the presence of factors that may promote or hinder performance of the behaviour (control beliefs) (Ajzen, 1991). In the context of this study, behavioural beliefs produce a favourable or unfavourable attitude toward technological interventions; normative beliefs result in perceived social pressure such as believing that others

think one should access technology for IPV; and control beliefs are the perceived ease or difficulty of taking up an online intervention.

Methods

The data reported in this paper were collected as part of the first phase of a larger project called I-DECIDE, which authors LT, ET and KH are involved with. The study ultimately developed an online healthy relationship tool and safety decision aid for women that has been described in detail elsewhere (Tarzia et al., 2015) and is now being evaluated through a randomised controlled trial (Hegarty et al., 2015). The aim of Phase One, however, was exploratory in nature, with the purpose being primarily to confirm the hypothesis that technology has a potential role in responding to IPV, and to ascertain what factors might encourage or discourage women from using an IPV website or app. To answer these questions, women who self-identified as having experienced fear of a partner in the previous six months were invited to participate in focus groups to give their views on how the internet and smartphones might be harnessed to address IPV.

Ethics approval for this research was granted by The University of Melbourne Human Research Ethics Committee (HREC #1339911.4).

Recruitment, Data Collection and Management

Participants for the focus groups were recruited through advertisements on The University of Melbourne online student portal, Facebook, Gumtree, Twitter, Craigslist Australia and various women's health websites. When women clicked on an online advertisement, they were directed to a short expression of interest (EOI) form where they were asked to input their availability for a focus group, their name, safe email address and/or telephone number. Further detail about 'safe' contacts is provided below under the heading, *Ethical and Safety Considerations*.

Focus groups for the I-DECIDE project were held at The University of Melbourne in a private room within a secure building. The sessions were informal and semi-structured in nature, and facilitated by a trained researcher. An additional note-taker was present but did not take part in the conversation. The discussions lasted approximately 60 minutes each and were audio recorded and later transcribed verbatim by members of the research team (LT and ET). Questions during the sessions focused on: whether participants thought women in unhealthy relationships or fearful of a partner could be helped over the internet or via a smartphone; the essential components of a web or app-based tool; barriers and facilitators to using a website or app for IPV; and specific design features or messaging.

Data Analysis

Transcripts of the focus groups were entered into the software program NVivo 10 (QSR International, 2015). An initial coding framework was developed by LT and ET after reading through the transcripts and discussing with DI. The framework was subsequently refined and an initial phase of coding conducted by LT on all focus group transcripts. DI, who was not involved in the project, reviewed the coding framework and independently coded the transcripts, bringing a fresh perspective to the analysis.

Once the data from the focus groups had been subjected to a preliminary round of inductive coding, identifying patterns of meaning and common ideas, the TPB was applied. Data were mapped to the most appropriate overarching (first-order) factors and subsequently, inductive second-order themes were generated within each category: behavioural beliefs that led to favourable or unfavourable attitudes towards uptake; perceived behavioural control consisting of perceived self-efficacy and controllability; and perceived social pressure arising from normative beliefs about taking up the technological intervention. Once all transcripts had been coded, the authors met on three occasions to discuss the fit of the model, initial cross coding and to discuss the emergence of themes.

Ethical and Safety Considerations

Women's safety and wellbeing was a priority throughout this research. Recruitment materials were worded to emphasise confidentiality, and the project was advertised to women 'worried about their relationship' or 'feeling unsafe' rather than to 'abused women' or women 'experiencing intimate partner violence'. This also allowed space for women who might not have identified with the terminology of abuse or violence to take part in the study.

During recruitment, women were contacted exclusively through methods that were identified by them in the EOI form as 'safe'. Information was provided during the EOI process describing what was meant by a 'safe' telephone number or email address (one that a perpetrator could not access). If women were unsure whether their email address was secure, they were advised to set up a new free email account for the purposes of receiving information about the study and provided with instructions on how to do this. Additional computer safety information was provided such as instructions on how to clear the browser history. If women provided a telephone number instead of an email address, the researchers followed a safety protocol when making contact, with instructions on what to do if an unknown person (particularly if it was a man) answered the telephone. As an additional precaution, all subsequent email or written communication with participants referred to a 'women's health study'.

On completion of the focus groups, all participants were provided with a resource list of help-lines and websites relevant to IPV and women's health. A protocol was developed for team members to follow in the event of a participant becoming distressed, and included supportive listening and referral to appropriate services.

As with all research into sensitive issues, vicarious trauma to the research team was a potential risk (Coles & Mudaly, 2010; Connolly & Reilly, 2007). Protocols were developed to assist the facilitating researchers in the event that they felt distressed or traumatised by stories or events that were recounted by the women during the groups, and a senior member of the research team with counselling experience was available to talk through any potential issues.

Participants

Data is reported from nineteen women aged between 20 and 25 years who participated in four focus groups between April and August 2014. Two of the groups (n=4 and n=5) were open to women aged 16-50, and two were open only to women aged 16-25 (n=8 and n=5). Despite the fact that the study was open to a wide range of ages, none of the women who took part were aged less than 20 years, and only three were aged over 25. As there were so few older women (n=3) who took part, their responses have been removed from the analysis for this paper. All participants were residing in Victoria, Australia at the time of the study, and all had self-reported experiencing fear of a partner in the previous six months. None of the women aged 20-25 were married at the time of participation, and most were tertiary-educated. Other demographic information was not collected about the participants, as we had emphasised that they did not need to disclose information about themselves if they did not wish to. Rather, the focus was on their views about technology as an intervention strategy more broadly.

Findings

Young women's views around responding to IPV using web-based applications can be grouped into three main categories that correspond to the key components of the TPB: 1) Behavioural Beliefs and Attitudes; 2) Normative Beliefs and Subjective Norms; and 3) Control Beliefs and Perceived Behavioural Control (Ajzen, 1991). A number of sub-themes were identified within these broader areas and are outlined below. As no major differences were found in participants' views regarding websites or apps, the terms have been used interchangeably throughout.

1. Behavioural Beliefs and Attitudes

According to the TPB, behavioural beliefs and attitudes can be indicative of a person's intention to carry out the behaviour in question (Ajzen, 1991). In this case, the young women involved in this study had a range of beliefs about websites and apps and their potential benefits (e.g. overcoming stigma associated with domestic violence services and normalising their

experiences of being in an unhealthy relationship) that may have increased the likelihood that they would use a technology-based IPV intervention in future. They also had clear views about what a website or app *ought* to do (raise awareness, provide information and strike a balance) in order to be useful and helpful to young women experiencing IPV.

It's easier than telling someone

The young women felt that seeking help anonymously via the internet or an app would be easier in many ways than face to face. There was discomfort around the idea of potentially negative reactions to disclosure, and embarrassment about revealing that one was in an unhealthy relationship. The young women perceived a degree of stigma associated with identifying as a victim of IPV and seeking help. There were a range of beliefs expressed regarding the possible views and responses of others to the disclosure of abuse in a relationship.

I feel when you approach services, there's this negative connotation attached to it where people say 'Oh, if I'm going and approaching someone to get help, is something wrong with me?' [FG 1]

I guess sometimes there are a lot of things that you don't feel comfortable to share with anybody. [FG 3]

Several participants pointed out that responses from others – even professionals – could potentially be invalidating of a woman's concerns, breach her privacy, or discourage her from accessing further help or support:

You don't want to go to a counsellor or someone, and be like, 'Well, all these things are happening' and then be scared that they'll tell you... 'No you're making things up, that's normal relationship stuff'. [FG 3]

I think even with counsellors as well, if they feel like information may be life threatening then they may actually share it with somebody else. [FG 4]

A website or app, on the other hand, assuming that appropriate safety measures were in place, could be accessed privately before a young woman had decided whether she wanted or needed to take the more significant step of speaking with a counsellor, IPV service or health professional. Participants felt that they could be more 'open' in a virtual space and did not need to worry about a negative reaction from others.

The option of...being able to maybe correspond with people anonymously, especially if you're scared of being judged or found out...that'd be really good. [FG 4]

The idea that even family or closest friends could respond judgementally was of concern to the participants, and several of the young women raised this as a barrier to face-to-face disclosure. This included judgement about the abusive partner, as well as of themselves and their relationship choices.

You feel like your friends sort of judge you to a point as well, and I think even your closest and dearest family. [FG 2]

At the same time, however, the young women felt that a second opinion on what was happening in a relationship would be beneficial and could assist with decision-making:

I think that getting a second and third opinion is something that helps people to make decisions [about relationships]. [FG 2]

Websites and apps were perceived as being more objective and unbiased than friends or family, whose advice might be coloured by their feelings about the young woman or her partner, or their own particular moral views on relationships. Furthermore, young women did not necessarily trust their own ability to assess the situation when it came to their relationships, and felt that a website or app could provide neutral feedback. As one young woman commented:

If it's kind of like a diagnostic thing where it's like, 'Is he manipulating you?' and it goes through questions you can ask yourself, that would be good because it's not one of those things you can pick up on when you're in love with someone. [FG 3]

It's not 'normal' to be in an abusive relationship

Study participants suggested that a website or app needed to reassure young women that there were others in the same situation, either through the use of anecdotes or stories from other women, the use of interactive forums, or information about the nature and prevalence of IPV.

Maybe have a forum where people post what they're going through, that could give a sense that I'm not going through this alone. There are so many people who are going through the same thing. [FG 1]

I feel like young women nowadays always sort of go to the internet first, just to check out...is this normal?...It's nicer just to know there are other people out there who are asking these questions as well. [FG 2]

A website or app can raise awareness

The participants saw great potential for an IPV support website or app to provide an important first step on the journey to safety and care and eventually link them to support services. Participants pointed out that many women are unaware that their relationship might be abusive, particularly if experiencing emotional or verbal abuse rather than physical abuse from a partner. A website or app was viewed as a way of self-informing and raising awareness around abusive behaviours. As one participant noted:

I guess if you're in an abusive relationship but you're not getting punched in the face...you can go on a website and kind of read a little bit. [FG 1]

Ensuring that the website or app was appropriate for young women in all stages of awareness and readiness for action was flagged as important by the participants. Many stated that there needed to be information and support covering the 'full spectrum' of violence, from an unhealthy relationship through to an emergency or crisis situation. In their terms, rather than addressing only the 'black and white stuff', the app or website needed to also address issues that were 'super light grey'. Participants acknowledged the difficulties in achieving this, due to the potential for women who were unsure of their relationship to be discouraged by the use of language such as 'abuse' or 'violence':

If immediately upon opening the app it just says, 'Are you being abused? Click here!' I'd pretty much go 'No.' [FG 3]

There's a view [about IPV] like, 'It's not going to happen to me. It's not going to happen to my friends, it doesn't exist in my circle, therefore this app is not for me' [FG 4]

A website or app should do more than provide information

The young women stressed that a website or app needed to do more than just provide information, and also needed to suggest possible steps or actions.

Information is around everywhere, and you can just look it up on the internet, and it's nice to have [it] there but sometimes it's like, 'No I'm in a bad situation, I need to know what to do next.' [FG 1]

Additionally, the young women stated that a website or app needed to link them in to further face-to-face sources of support such as women's services, sexual assault services, or counsellors.

When you have a gut feeling that something's not going right and you don't know, do you call this [IPV] service?...Is it that bad? I think a really good app can fill that gap in that time frame where you're just not quite sure where to go. [FG 4]

Even if a young woman did not wish to access the suggested services immediately, simply knowing that they were there and could be accessed when ready was perceived as comforting and reassuring. Some participants, however, suggested that a website or app may lack the 'human touch' and should function as a pathway to services rather than a replacement for them.

I don't think it can replace face-to-face contact. I think it's really important that the app can refer you to somebody...to speak to. [FG 4]

If it's used as a counselling tool, you can't read something and be like 'Oh OK, everything's fine now'. I think that's where you'd need to link it quite well into physical services. [FG 1]

A website or app needs to strike a balance

Beyond the initial first step, the young women stressed the delicate balance a website or app would need to strike in order to maintain engagement with users. They outlined a range of often contradictory requirements that a potential website or app for IPV would need to satisfy in order to ensure uptake of the resource. Several of the participants, for example, mentioned that the use of 'youth slang' in an attempt to engage with a younger audience would be met with derision:

I wouldn't really want to go for something that has youth slang or anything *laughter* because that can get a bit...tacky... Just simple information, plain and clear [is better]. [FG 4]

At the same time, however, the participants felt that it would be essential for a website or app aimed at young women to be relevant to their particular life stage and needs. Rather than focusing on issues like marriage, joint finances or children, for instance, it would need to be relevant to the more fluid and changeable nature of young women's relationships. Participants also thought that it ought to include strategies for dealing with cyber abuse or stalking on social media.

The tone of the website or app was perceived as needing to be positive and friendly, but at the same time, professional and simply-worded. Participants wanted to be reassured that they were not using a website or app that was untrustworthy or likely to be hacked, and wanted the look and feel to be similar to a government or other official website, suggesting that the information and advice was reliable and evidence-based.

I think it's all about feeling safe, and if you want to feel safe using a website you want it to look 'legit' [legitimate]... That's what you want the webpage to say, that this is a safe environment, and this is professional. [FG 1]

While the tone needed to be empathetic and caring, there also needed to be 'practical, solid advice' that could be readily understood by young women when in an 'emotional state'. According to the participants, the website or app also needed to be upfront about

behaviours that were abusive or violent, and honestly assess a woman's level of risk or danger rather than being 'too PC [politically correct] or friendly'.

While the young women said that they would appreciate a direct, unbiased assessment of the relationship, they did not want the website or app to tell them what to do. Several of the participants highlighted the importance of the language not being too prescriptive, and that a website or app should gently suggest and 'open up possibilities' rather than giving young women's experiences a definitive label. Instead of feeling judged, young women wanted a website or app to make them feel calm, comforted, relieved, equipped, empowered and hopeful.

[A young woman] should feel relieved. Like she is equipped to know what to do, and not lost and drowning her sorrows and burden by herself. Like someone is there to help her [FG 4].

2. Normative Beliefs and Subjective Norms

Normative beliefs and subjective norms refer to the ways in which the perceived views of others might impact upon a person's intention to carry out the behaviour in question. Several normative beliefs shaped the young women's views about how an IPV support website or app might be taken up and utilised. These beliefs encompassed views on technology as well as views on help-seeking for IPV more broadly.

For young people, technology is a way of life

In particular, the participants saw young women – as opposed to older women – as the primary beneficiaries of a web or smartphone based intervention for IPV, given the widespread adoption of technology amongst their demographic. The use of technology was clearly perceived as an acceptable way for young people to find information and interact, and was viewed as an activity that their peers all engaged in:

I spend about 5 hours a day on the internet or more...just being honest! And most young women do nowadays. [FG 4]

I have a lot of teenage cousins...They're always on their phones, it's such a big part of their lives, so I think [an IPV intervention] in an app format is really good. [FG 3]

It needs to be endorsed by someone who counts

Young women noted that a celebrity endorsement or high-profile spokesperson could normalise the use of an IPV website or app and make it seem appropriate to seek help through that avenue.

Sometimes attaching a celebrity or a spokesperson can remove any stigma from something. Like things like *Beyond Blue* [organisation for depression] and *Headspace* [young people's mental health organisation] and stuff, when musicians talk about it, it suddenly makes it seem OK. [FG 4]

3. Control Beliefs and Perceived Behavioural Control

Perceived behavioural control in the TPB refers to factors beyond the individual that may prevent or facilitate them undertaking the behaviour, irrespective of whether they have a positive attitude towards it (Ajzen, 1991). In this case, although the young women were positive about the potential for a website or app to respond to IPV, a number of barriers and facilitators (access, safety and privacy) were identified that could either limit or promote its uptake and use.

Access anywhere, anytime

Most of the young women highlighted the benefits that the internet and smartphones could offer in terms of providing ready access to support when experiencing IPV.

If you have your phone with you, that means it opens up a lot....You don't have to go to a friend, you don't have to go to a safe place or a specific place to access information, it can be 24/7, anywhere you are, which is great. [FG 3]

Many pointed out the possible safety issues faced by women in controlling relationships when attempting to seek help through a counsellor or women's service, and how the option of accessing help via technology might ameliorate this risk:

Sometimes going to a counsellor is extremely dangerous for women...That's somewhere you have to go where you have to be accountable for the time like, 'Where were you?' et cetera. [FG 4]

Protecting safety and privacy

Despite the potential for a website or app for IPV to improve access to help and support, the young women emphasised the importance of the technology being safe and secure for users. Concerns were raised by some participants over the possibility of a perpetrator or another party viewing a woman's browser history or recently used apps.

(P1) It's a great idea, but there are some things about it, like the partner looking at the phone...

(P2) Yeah, [and] if it stored personal information or wanted to access anything else from your phone, I'd be against that. [FG 4]

Several participants had suggestions as to how the safety and security of a website or app could be improved so that this concern did not become a barrier to accessing help via technology. These included password protection for the app or website; disguising the app or website as something unrelated to IPV; automatic log out of the app or website if a woman does not use her phone within a set period of time; and providing information to users about how to clear their cache or browser history.

So maybe there could be something like, the design could have, like, lots of flowers or something in the background so if a partner, or a person was to see it the first thing they would notice is not the content. [FG 4]

Discussion

Our findings provide useful information about how young women view the use of internet-based technology such as websites or apps to address IPV. Although studies have hypothesised about the benefits of web-based applications to address this sensitive area (Glass et al., 2010; Tarzia et al., 2015), few have actually explored the views of the potential end users. This paper uses the framework of the Theory of Planned Behaviour (Ajzen, 1991) to understand how young women's beliefs about, and attitudes towards websites and apps for IPV could shape design and influence uptake of future interventions. Our findings discuss young women's *intentions* to use a website or app and also help us to understand how other factors beyond the individual might come into play that would prevent or facilitate its actual use in practice.

The majority of the findings were *Behavioural Beliefs*, describing elements of participants' own individual attitudes towards a website or app for IPV. Importantly, the 'outsider perspective' that could be obtained anonymously through a website or app was seen as being more objective and unbiased than what young women might receive from friends or family. This was particularly relevant in light of the participants' beliefs around face-to-face help-seeking and the idea that attending specialised services was difficult due to the stigma and embarrassment of being a 'victim'. These findings are consistent with other studies exploring

young people's views around technology more broadly, where participants identified online mediums as preferable to face-to-face communication for embarrassing or sensitive information (Awan & Gauntlett, 2013; Haxell, 2014; Moreno et al., 2011). At the same time, however, the young women felt that a web or smartphone application could not completely replace the 'human touch' of real-life support and recommended that an IPV website or app connect them to appropriate resources. A similar tension between online and offline support is reflected in the existing literature, particularly in the context of help-seeking for mental health issues (Awan & Gauntlett, 2013; Bradford & Rickwood, 2014; Hillier, Mitchell, & Ybarra, 2012).

The young women also had specific beliefs regarding what an IPV website or app ought to do, including raising awareness, both in terms of what constitutes IPV, as well as around what services are available. They felt that it was important to provide practical advice and links rather than simply informing and asserted that a delicate balance needed to be struck between relevance, practicality, empathetic support, and upfront assessment of risk and danger.

Similar to other IPV studies using the TPB (Byrne & Arias, 2004; O'Doherty, Taket, et al., 2016), the data for *normative beliefs* was brief. For the young women in the study, technology was perceived as a 'way of life' amongst their cohort. Studies have shown that young people are extremely comfortable with the use of technology (Moreno, Kelleher, Ameenuddin, & Rastogi, 2014), and accustomed to sharing personal information online (Awan & Gauntlett, 2013). This is supported by the increasing number of ehealth and mhealth interventions being developed for this demographic over the last few years (Lim et al., 2011; Mortimer, Rhee, Guy, Hayen, & Lau, 2015). At the same time, however, participants pointed out that the specific use of technology to address IPV may need to be normalised further by the use of celebrity endorsements or high-profile spokespeople. Marketing research by Noble and colleagues (Noble, Haytko, & Phillips, 2009) on college-age Generation Y consumers confirms that celebrity endorsements play a significant part in shaping young people's decisions about products and brands.

A number of factors were identified as *Control Beliefs* that might impact on whether young women would actually use the website or app in practice. On the one hand similar to other studies (Awan & Gauntlett, 2013), participants emphasised the benefits of being able to access help anywhere, at any time by delivering an intervention via web or smartphone. On the other hand, young women highlighted the potential dangers should a perpetrator see the website or app. This represents a very real concern as increased attention is drawn to technology-facilitated abuse and stalking as forms of IPV (Stonard, Bowen, Walker, & Price, 2015; Woodlock & Webster, 2013). Younger perpetrators are likely to be particularly technology-savvy and able to find out what their partners are doing online, if appropriate safety mechanisms are not put into place.

These findings highlight particular areas that developers of future online or smartphone IPV interventions for young women could focus on. The application of the TPB to the views of the young women in this study suggests that behavioural beliefs and attitudes are the primary driver of whether or not they would take up and use an IPV intervention via the web or smartphone. Similar behavioural beliefs were found in a TPB analysis of uptake of a face to face intervention (awareness; seeking an avenue to help)(O'Doherty, Taket, et al., 2016). Web or app-based IPV interventions for young women, then, may need to focus attention on individual level factors such as language, tone, relevance to stage of awareness, anonymity, and links to sources of face-to-face support in order to encourage uptake. A particular challenge for an online intervention – if it is designed to be used without human interaction – will be striking a balance between professionalism and warm support, providing practical advice while not being too prescriptive, and being relevant to young people's stage of life without being artificial.

As well as the individual factors, developers of future IPV interventions will need to carefully think through ways to protect women's safety online (Constantino, Crane, Noll, Doswell, & Braxter, 2007; Lindsay et al., 2013). Although there is currently no way to guarantee that a determined perpetrator would not be able to access a young woman's browser history or phone, many simple strategies may minimise risk. These strategies, however, will not only need to be effective in practice, but also convincing to young women. A recent study by Moreno and

colleagues (Moreno et al., 2014), for instance, found that young people are suspicious of existing privacy measures on social networking sites such as Facebook, despite assurances that their personal information is protected.

Limitations

The findings of our study are limited to the younger age group due to the fact that very few older women took part. Older women may have different barriers and enablers to using technology to address IPV. Furthermore, given that the methods of recruitment included The University of Melbourne student portal, many of the participants are likely to have received some tertiary education; it is possible that this impacted on the findings to some extent. Lastly, while the TPB provides a useful framework for exploring *intentions* to take up an intervention, previous research has identified its limitations in addressing other factors that might affect uptake or engagement (Michie, van Stralen, & West, 2011; O'Doherty, Taket, et al., 2016). For instance, the TPB assumes a linear decision-making process, whereas survivors of IPV often experience decision making more fluidly (Cluss et al., 2006). Furthermore, the TPB does not take users' past experiences into account; the young women in this study are likely to have based their views around technology to some extent on their previous interactions with it (e.g. through internet dating websites or social media). This was not explored within the study.

Conclusion

The key role that end users can play in the development and design phases of interventions, particularly when delivered online or via smartphone, is becoming increasingly evident (McKenzie & Haines, 2014). Researchers (Bate & Robert, 2006; Lowes & Hulatt, 2005) – particularly in health – are turning more often to participatory design in the development of interventions and engaging users early in the design process. This paper outlines the views and opinions of young women that can be used to shape the content and look and feel of IPV interventions. The use of the TPB (Ajzen, 1991) provides a framework through which we can examine *how* young women's beliefs about help-seeking and technology might influence their use and engagement with a website or app in the context of IPV and more broadly.

Areas for attention when developing online or app-based interventions for IPV include: use of social messaging to increase uptake; addressing safety and privacy concerns upfront; content that addresses awareness; support and links to services relevant to a range of stages of readiness to take action. The potential for 'e-safe relationships' to address IPV, similar to e-mental health (Alvarez-Jimenez et al., 2014; Richards & Richardson, 2012), is considerable, considering the isolation and stigma surrounding IPV (C. E. Murray, Crowe, & Brinkley, 2015). The convenience, flexibility, low cost and ability to fill service gaps existing in the IPV field through the use of technology make this an important area to pursue into the future.

References

- Alvarez-Jimenez, M., Alcazar-Corcoles, M. A., BGonzalez-Blanch, C., Bendall, S., McGorry, P. D., & Gleeson, J. F. (2014). Online, social media and mobile technologies for psychosis treatment: A systematic review on novel user-led interventions. *Schizophrenia Research*, 156, 96-106.
- Ashley, O. S., & Foshee, V. A. (2005). Adolescent help-seeking for dating violence: prevalence, sociodemographic correlates, and sources of help. *J Adolesc Health*, 36(1), 25-31. doi:10.1016/j.jadohealth.2003.12.014
- Australian Bureau of Statistics. (2013). *Personal Safety Survey 2012*. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4906.0>.
- Australian Bureau of Statistics. (2014). Household Use of Information Technology, Australia, 2012-2013, cat no. 8146.0. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/8146.0> Archived at <http://www.webcitation.org/6mDypCXIz>

- Australian Communications and Media Authority. (2013). *ACMA Communications report 2012-13*. Retrieved from Melbourne: Archived at <http://www.webcitation.org/6mE0QpIbl>
- Awan, F., & Gauntlett, D. (2013). Young People's Uses and Understandings of Online Social Networks in Their Everyday Lives. *Young, 21*(2), 111-132.
- Azjen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211.
- Bair-Merritt, M., Lewis-O'Connor, A., Goel, S., Amato, P., Ismailji, T., Jelley, M., . . . Cronholm, P. (2014). Primary Care-Based Interventions for Intimate Partner Violence. *American Journal of Preventive Medicine, 46*(2), 188-194.
- Bate, P., & Robert, G. (2006). Experience-based design: from redesigning the system around the patient to co-designing services with the patient. *Quality & Safety in Health Care, 15*(5), 307-310.
- Berger, M., Wagner, T., & Baker, L. (2005). Internet use and stigmatized illness. *Social Science & Medicine, 61*(8), 1821-1827.
- Black, B. M., Tolman, R. M., Callahan, M. R., Saunders, D. G., & Weisz, A. N. (2008). When will adolescents tell someone about dating violence victimization? *Violence Against Women, 14*(7), 741-758. doi:10.1177/1077801208320248
- Bonomi, A., Anderson, M., Nemeth, J., Rivara, F., & Buettner, C. (2013). History of dating violence and the association with late adolescent health. *BMC Public Health, 13*(1), 821.
- Brabeck, K. M., & Guzman, M. R. (2009). Exploring Mexican-origin intimate partner abuse survivors' help-seeking within their sociocultural contexts. *Violence & Victims, 24*, 817-832.
- Bradford, S., & Rickwood, D. (2014). Adolescents' preferred modes of delivery for mental health services. *Child and Adolescent Mental Health, 19*(1), 39-45.
- Bull, S. S., Levine, D., Black, S. R., Schmiege, S., & Santelli, J. (2012). Social Media-Delivered Sexual Health Intervention: A Cluster Randomized Controlled Trial. *American Journal of Preventive Medicine, 43*(5), 467-474.
- Byrne, C., & Arias, I. (2004). Predicting women's decisions to leave abusive relationships: An application of the Theory of Planned Behavior. *Journal of Applied Social Psychology, 34*.
- Cluss, P. A., Chang, J. C., Hawker, L., Scholle, S. H., Dado, D., Buranosky, R., & Goldstrohm, S. (2006). The process of change for victims of intimate partner violence: support for a psychosocial readiness model. *Women's Health Issues, 16*(5), 262-274.
- Coles, J., & Mudaly, N. (2010). Staying Safe: Strategies for Qualitative Child Abuse Reviewers. *Child Abuse Review, 19*, 56-69.
- Connoly, K., & Reilly, R. (2007). Emergent issues when researching trauma: A confessional tale. *Qualitative Inquiry, 13*(522-540).
- Constantino, R., Crane, P. A., Noll, B. S., Doswell, W. M., & Braxter, B. (2007). Exploring the feasibility of email-mediated interaction in survivors of abuse. *Journal of Psychiatric and Mental Health Nursing, 14*, 291-301.
- Ellis, L. A., Collin, P., Hurley, P. J., Davenport, T. A., Burns, J., M., & Hickie, I. B. (2013). Young men's attitudes and behaviour in relation to mental health and technology: implications for the development of online mental health services. *BMC Psychiatry, 13*, 119.
- Exner-Cortens, D., Eckenrode, J., & Rothman, E. (2013). Longitudinal Associations Between Teen Dating Violence Victimization and Adverse Health Outcomes. *Pediatrics, 131*(1), 71-78. doi:10.1542/peds.2012-1029
- Feder, G., Hutson, M., Ramsay, J., & Taket, A. (2006). Women exposed to intimate partner violence: expectations and experiences when they encounter health care professionals: a meta-analysis of qualitative studies. *Archives of Internal Medicine, 166*(1), 22-37.
- Free, C., Phillips, G., Galli, L., Watson, L., Felix, L., Edwards, P., . . . Haines, A. (2013). The Effectiveness of Mobile-Health Technology-Based Health Behavior Change or Disease Management Interventions for Health Care Consumers: A Systematic Review. *PLoS Med, 10*(1). doi:10.1371/journal.pmed.1001363
- Fry, D. A., Messinger, A. M., Rickert, V. I., O'Connor, M. K., Palmetto, N., Lessel, H., & Davidson, L. L. (2014). Adolescent Relationship Violence: Help-Seeking and Help-Giving Behaviors

- among Peers. *Journal of Urban Health*, 91(2), 320-334.
doi:<http://dx.doi.org/10.1007/s11524-013-9826-7>
- Garcia-Moreno, C., Hegarty, K., d'Oliveira, A., Koziol-McLain, J., Colombini, M., & Feder, G. (2015). The health-systems response to violence against women. *The Lancet*, 385, 1567-1579.
- Glass, N., Eden, K. B., Bloom, T., & Perrin, N. (2010). Computerized aid improves safety decision process for survivors of intimate partner violence. *J Interpers Violence*.
- Guse, K., Levine, D., Martins, S., Lira, A., Gaarde, J., Westmorland, W., & Gilliam, M. (2012). Interventions Using New Digital Media to Improve Adolescent Sexual Health: A Systematic Review. *Journal of Adolescent Health*, 51(6), 535-543.
- Haxell, A. (2014). On becoming textually active at Youthline, New Zealand. *British Journal of Guidance & Counselling*, 43(1), 144-155.
- Hegarty, K., O'Doherty, L., Taft, A., Chondros, P., Brown, S., Valpied, J., . . . Gunn, J. (2013). Screening and counselling in the primary care setting for women who have experienced intimate partner violence (WEAVE): a cluster randomised controlled trial. *The Lancet*, 382(9888), 249-258.
- Hegarty, K., & Taft, A. (2001). Overcoming the barriers to disclosure and inquiry of partner abuse for women attending general practice. *Australian & New Zealand Journal of Public Health*, 25(5), 433-437 435p.
- Hegarty, K., Tarzia, L., Murray, E., Valpied, J., Humphreys, C., Taft, A., . . . Glass, N. (2015). Protocol for a randomised controlled trial of a web-based healthy relationship tool and safety decision aid for women experiencing domestic violence (I-DECIDE). *BMC Public Health*, 15(736).
- Hillier, L., Mitchell, K., & Ybarra, M. (2012). The Internet As a Safety Net: Findings From a Series of Online Focus Groups With LGB and Non-LGB Young People in the United States. *Journal of LGBT Youth*, 9, 225-246.
- Koziol-McLain, J., Vandal, A. C., Nada-Raja, S., Wilson, D., Glass, N., Eden, K. B., . . . Case, J. (2015). A web-based intervention for abused women: the New Zealand *isafe* randomised controlled trial protocol. *BMC Public Health*, 15(56).
- Lim, M. S. C., Hocking, J. S., Aitken, C. K., Fairley, C. K., Jordan, L., Lewis, J. A., & Hellard, M. E. (2011). Impact of text and email messaging on the sexual health of young people: a randomised controlled trial. *Journal of Epidemiology and Community Health, Online*. doi:doi:10.1136/jech.2009.100396
- Lindsay, M., Messing, J. T., Thaller, J., Baldwin, A., Clough, A., Bloom, T., . . . Glass, N. (2013). Survivor Feedback on a Safety Decision Aid Smartphone Application for College-Age Women in Abusive Relationships. *Journal of Technology in Human Services*, 31, 368-388.
- Lowes, L., & Hulatt, I. (Eds.). (2005). *Involving Service Users in Health and Social Care Research*. New York: Taylor & Francis.
- Martin, C. E., Houston, A. M., Mmari, K. N., & Decker, M. R. (2012). Urban teens and young adults describe drama, disrespect, dating violence and help-seeking preferences. *Maternal And Child Health Journal*, 16(5), 957-966. doi:10.1007/s10995-011-0819-4
- May, C., Eton, D. T., Boehmer, K., Gallacher, K., Hunt, K., MacDonald, S., . . . Shippee, N. (2014). Rethinking the patient: using Burden of Treatment Theory to understand the changing dynamics of illness. *BMC Health Services Research*, 4(281). doi:10.1186/1472-6963-14-281
- McKenzie, A., & Haines, H. (2014). Consumer and Community Participation Fact Sheet P01: Why Involve Consumers and Community Members in Research, Revised. Western Australia: The University of Western Australia & Telethon Kids Institute,.
- Michie, S., van Stralen, M. M., & West, R. (2011). The behavior change wheel: A new method for characterising and developing behaviour change interventions. *Implementation Science*, 6(42), 1-11.
- Moreno, M., Jelenchick, L. A., Egan, K. G., Cox, E., Young, H., Gannon, K. E., & Becker, T. (2011). Feeling bad on Facebook: depression disclosures by college students on a social networking site. *DEPRESSION AND ANXIETY*, 28(6), 447-455. doi:10.1002/da.20805

- Moreno, M., Kelleher, E., Ameenuddin, N., & Rastogi, S. (2014). Young Adult Females' Views Regarding Online Privacy Protection at Two Time Points. *Journal of Adolescent Health, 55*, 347-351.
- Mortimer, N., Rhee, J., Guy, R., Hayen, A., & Lau, A. Y. S. (2015). A Web-Based Personally Controlled Health Management System Increases Sexually Transmitted Infection Screening Rates in Young People: A Randomized Controlled Trial. *Journal of the American Medical Informatics Association, 22*(4), 805-814.
- Murray, C. E., Crowe, A., & Brinkley, J. (2015). The Stigma Surrounding Intimate Partner Violence: A Cluster Analysis Study. *Partner Abuse, 6*(3), 320-336.
- Murray, E. (2012). Web-Based Interventions for Behavior Change and Self-Management: Potential, Pitfalls, and Progress. *Medicine 2.0, 1*(2). doi:10.2196/med20.1741
- Murray, E., Burns, J., See Tai, S., Lai, R., & Nazareth, I. (2005). Interactive Health Communication Applications for people with chronic disease. *Cochrane Database of Systematic Reviews*(4), Art No. CD004274. doi:DOI: 10.1002/14651858.CD004274.pub4
- Noble, S., Haytko, D., & Phillips, J. (2009). What drives college-age Generation Y consumers? *Journal of Business Research, 62*, 617-628.
- O'Doherty, L., Taft, A., McNair, R., & Hegarty, K. (2016). Fractured Identity in the Context of Intimate Partner Violence: Barriers and Opportunities to Seeking Help in Health Settings. *Violence Against Women, 22*(2), 225-248.
- O'Doherty, L., Taket, A., Valpied, J., & Hegarty, K. (2016). Receiving care for intimate partner violence in primary care: Barriers and enablers for women participating in the weave randomised controlled trial. *Social Science & Medicine, online*, 35-42.
- Ofcom. (2015). *Adults' media use and attitudes: Report 2015*. Retrieved from United Kingdom: http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/media-lit-10years/2015_Adults_media_use_and_attitudes_report.pdf
- QSR International. (2015). NVivo 10.
- Ramsay, J., Carter, Y., Davidson, L., Dunne, D., Eldridge, S., Feder, G., . . . Warburton, A. (2009). Advocacy interventions to reduce or eliminate violence and promote the physical and psychosocial well-being of women who experience intimate partner abuse (Review). *The Cochrane Database of Systematic Reviews, Issue 3. Art. No.:CD005043*. doi:10.1002/14651858.CD005043.pub2
- Richards, D., & Richardson, T. (2012). Computer-based psychological treatments for depression: A systematic review and meta-analysis. *Clinical Psychological Review, 32*, 329-342.
- Rideout, V. (2002). Generation Rx.com. *Marketing Health Services, 22*(1), 26-30.
- Silverman, J. G., Raj, A., Mucci, A., Lorelei, A., & Hathaway, J. (2001). Dating Violence Against Adolescent Girls and Associated Substance Use, Unhealthy Weight Control, Sexual Risk Behavior, Pregnancy, and Suicidality. *JAMA (Journal of the American Medical Association), 286*(5), 572-579.
- Stonard, K., Bowen, E., Walker, K., & Price, S. (2015). 'They'll Always Find a Way to Get to You': Technology Use in Adolescent Romantic Relationships and Its Role in Dating Violence and Abuse. *Journal of Interpersonal Violence, [Online first]*. doi:10.1177/0886260515590787
- Sullivan, M., Bhuyan, R., Senturia, K., Shiu-Thornton, S., & Ciske, S. (2005). Participatory Action Research in Practice: A Case Study in Addressing Domestic Violence in Nine Cultural Communities. *Journal of Interpersonal Violence, 20*(8), 977-995.
- Swanberg, J. E., & Logan, T. K. (2005). Domestic Violence and Employment: A Qualitative Study. *Journal of Occupational Health Psychology, 10*(1), 3-17.
- Taft, A., O'Doherty, L., Hegarty, K., Ramsay, J., Davidson, L., & Feder, G. (2013). Screening women for intimate partner violence in healthcare settings. *The Cochrane Database of Systematic Reviews, Issue 4: Art No.CD007007*.
- Tait, R. J., & Christensen, H. (2010). Internet-based interventions for young people with problematic substance use: a systematic review. *Medical Journal of Australasia, 92*, S15-S21.

- Tarzia, L., Murray, E., Humphreys, C., Glass, N., Taft, A., Valpied, J., & Hegarty, K. (2015). I-DECIDE: An online intervention drawing on the Psychosocial Readiness Model for women experiencing domestic violence. *Women's Health Issues, 26*(2), 206-218. doi:10.1016/j.whi.2015.07.011
- Vos, T., Astbury, J., Piers, L. S., Magnus, A., Heenan, M., Stanley, L., . . . Webster, K. (2006). Measuring the impact of intimate partner violence on the health of women in Victoria, Australia. *Bull World Health Organ, 84*(9), 739-744.
- Webb, T. L., Joseph, J., Yardley, L., & Michie, S. (2010). Using the Internet to Promote Health Behavior Change: A Systematic Review and Meta-analysis of the Impact of Theoretical Basis, Use of Behavior Change Techniques, and Mode of Delivery on Efficacy. *Journal of Medical Internet Research, 12*(1: e4). doi:0.2196/jmir.1376
- Woodlock, D., & Webster, A. (2013). SmartSafe and the Abuse of Technology. *Parity, 26*(2), 27-28.
- World Health Organization. (2013). *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence*. Retrieved from Geneva, Switzerland:
- Zink, T., Jacobson, C. J., Jr., Regan, S., & Pabst, S. (2004). Hidden victims: the healthcare needs and experiences of older women in abusive relationships. *J Womens Health (Larchmt), 13*(8), 898-908.

Acknowledgements: N/A

Funding: This work was funded by an Australian Research Council Discovery Project Grant, DP 130102799