



ELSEVIER

Contents lists available at [ScienceDirect](#)

Technology in Society

journal homepage: www.elsevier.com/locate/techsoc

An exploratory study of the impact of information communication technology (ICT) or computer mediated communication (CMC) on the level of violence and access to service among intimate partner violence (IPV) survivors in Canada

Arshia U. Zaidi*, Shanti Fernando, Nawal Ammar

Faculty of Social Science and Humanities, University of Ontario Institute of Technology, 2000 Simcoe Street North, Oshawa, ON, L1H 7K4, Canada

ARTICLE INFO

Article history:

Received 25 April 2014

Received in revised form 6 December 2014

Accepted 12 December 2014

Available online xxxx

Keywords:

Technology

Intimate partner violence

Immigrant women

Information communication technology (ICT)

Computer mediated communication (CMC)

ABSTRACT

This paper presents exploratory research on the use of information communication technologies (ICTs) or computer mediated technologies (CMCs) (i.e., cell phones and the internet) among immigrant women who are intimate partner violence survivors (IPV) in Canada. The discussion begins with a presentation of initial data examining the impact of such technology on the level and extent of violence experienced by IPV survivors, and on their ability to access appropriate services. Furthermore, an assessment of whether this form of technology aided in the development of a prevention or safety plan, is explored. The data is based on non-random sample surveys of immigrant women IPV survivors with Canada. While the limited scholarship on ICT or CMC usage indicates that there is a digital divide and that various socio-demographic factors do play a role in utilizing the technology, our data does not display a black and white or any streamlined pattern with regards to the digital divide and sociodemographics factors. An examination of the participants' various sociodemographics indicates that the digital divide within this population is not influenced by access or knowledge to the technology but by other factors often not discussed in the intersectionality models. An intersectional model of race and immigration status along with the existing literature on intimate partner violence among immigrant women especially issues of isolation and social networking inform this paper.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

Intimate partner violence (IPV)¹ has “garnered increasing public and academic attention over the years and is being recognized as a complex global sociocultural

problem and public health epidemic” [81, p. 29]. In recent years, according to Klevens (2007) [83, p. 111], IPV “is a leading cause of death, disability and hospitalization” which includes physical, sexual, emotional/psychological, and financial forms of abuse [3]. In the United States,

* Corresponding author.

E-mail address: arshia.zaidi@uoit.ca (A.U. Zaidi).

¹ In accordance with the World Health Organization (WHO), intimate partner violence (IPV) is defined as any behaviour within an intimate relationship that causes physical (slapping, hitting, kicking, or beating), psychological (intimidation, constant belittling or humiliation) or sexual harm to those in that relationship. It includes acts of physical aggression, psychological abuse, forced sexual intercourse or any other controlling behaviour (isolating a person from their friends/family).

between 30% and 50% of immigrant women have been sexually or physically abused by an intimate partner [58,6,72,100,112,113]. In Canada, the literature is inconclusive regarding the rates of IPV among immigrant women. Some literature notes that the rates of IPV are lower among immigrant women compared with Canadian-born women [9,74]. Others [34] note that immigrant women are abused at a higher rate, but they do not report the abuse and as a result their victimization is underrepresented by official data. Regardless, the literature agrees that the nature of the immigrant women's victimization from IPV is different from that of Canadian born women [105]. Yet, other literature shows that there is a difference between the prevalence and risk of IPV among recent and non-recent immigrant women. The "crude prevalence of IPV" say Cohen and Maclean (2004) [48] is "similar among recent and non-recent immigrant women", but the "risk for IPV" is much lower among recent immigrant women. According to Statistics Canada (2003), IPV accounts for 30–60 percent of all culpable homicides of females annually. In 2014, women in Canada continue to be more likely than men to be victims of spousal abuse. In Ontario between 2002 and 2007 domestic violence incidences resulted in 230 deaths involving 142 women, 23 children, and 65 men. Even though knowledge related to risk factors associated with IPV in immigrant communities is increasing [89], less is known about these determinants as perceived by immigrant women themselves. Barrett and St. Pierre, (2001, 48) note that "despite changes in policy that promote the ending of violence against women in North America (e.g., pro-charging and mandatory arrest policies), intimate partner violence continues to be a major risk factor threatening women's psychological and physical well-being."

There is a mushrooming body of research on IPV, in Canada. However, while the causes, nature, and extent of violence against women have been discussed and debated, less effort has been exerted systematically to distinguish the unique experiences of specific groups of victims in Canada. While there are two major databases that do exist in Canada regarding violence and victimization of women, empirical data regarding the number of immigrant women and their experiences of domestic violence in the host country remains limited and inconclusive [91,109]. As indicated previously, the literature both in Canada and the US recognizes that IPV victimization experience for racialized immigrant women is different and a cultural component does exist that should indeed promote culturally competent interventions [28,83,105].

In recent decades, research on IPV has relatively increased and has focused on a number of issues. These include a focus on resources, formal and informal, used by victims of IPV [45], barriers to help seeking [7] examinations of women's sociodemographic characteristics and their use of informal and formal supports in response to violence [4]. Explanatory factors, like ethnicity [2,39,60] or other interlocking factors of disadvantages such as class, patriarchy, religion, poverty, and racism or ethnic bias; [103,115], language barriers and immigrant status [16], and length of residency in Canada [22] continue to be debated in the literature. According to Dimond, Fiesler & Bruckman (2011) [37]; predictors like

gender, age, years of education, poverty, social support, and a history of family violence are the more common factors that have been tested repeatedly as potential risk factors of IPV. Outside of these common explanatory factors of IPV there is a new trendsetter that has not been extensively studied and caught the attention of recent scholars. Dimond, Fiesler & Bruckman (2011) [37] document how the impact of information communication technologies (ICTs) or computer mediated communication (CMC), like cell or mobile phones and the internet, have been neglected, despite the extensive usage and ownership of such technologies.

The information age is at its peak and individuals living in today's social world, especially women, have a high dependency on various technologies to seek information [64,67]. Tucker, Cremer, Fraser & Southworth (2005) [114]; as well as Finn & Banach (2000) [64] document how certain technologies (i.e., the internet, and mobile devices) are being utilized strategically to perhaps benefit and empower survivors of IPV. For example, Finn & Banach (2000) [64] note that email alone can greatly expand the social support network of these victims; also organizational or service agency websites can offer much information regarding IPV, relationship assessment, services offered, safety planning and various resources. It has been documented that technological usage by survivors of IPV has both advantages and disadvantages. For example, Finn & Banach (2000) [64, p. 786] outline the "problems and dangers that may be encountered when [vulnerable] women seek health and human services on the internet." Other scholars suggest technology to be "strategically" beneficial in facilitating a safety net or escape plan, finding resources (i.e. shelters), creating websites and even using it as a story-teller and support network with others who have undergone similar experiences [114]. The other side of the technological debate engages in a discussion about how these similar technologies may assist the perpetrator or abuser to "maintain control of their victims and make it more difficult to leave a relationship" [37, p. 413] and/or "use technology to stalk to them" [53, p. 842] or police the relationship. Educating victims and/or survivors of IPV, as well as advocates about various ICTs and CMCs is imperative to the process. Finn & Atkinson (2009) [18, p. 54] emphasize that "limited knowledge about the types of capabilities of new technologies can increase the likelihood that women will continue to be victims of harassment and control." This paper explores how these technologies impact and influence immigrant women survivors of IPV use, access and safety.

Within the Canadian context there is a little empirical evidence documenting access and usage of communication technologies in by battered immigrant women survivors. Therefore, the research objectives of this paper are three-fold. First, it explores how technology usage by IPV survivors impacts the level and extent of violence experienced by battered immigrant women. Second, this paper explores how this technological usage and/or adaptation influences their ability to access appropriate services. Third and last, to this research assesses whether ICTs or CMCs aided in the development of a prevention or safety plans. In combination, the answers to these basic exploratory questions could translate to knowledge and policy formation with respect

to information communication technologies and the corresponding service agencies these immigrant women access. Understanding how women immigrant survivors of IPV make use of ICTs or CMCs to escape or reduce the violence is critical to the development and establishment of individual and community-based intervention strategies by many service provider agencies including the police, domestic violence advocacy organizations, and hospitals.

2. Theoretical framework

This paper's organizing perspective is based on the idea that there is a range of diverse factors that intersect to influence women's experiences of violence. These include but are not limited to gender, race, sexual orientation, class, immigration, education, and linguistic fluency. These factors interact with each other creating a domestic violence situation that goes beyond the a-symmetrical relationship between the two genders [8,10,105]. This situation renders the experiences of IPV, while universal in its overall impact, qualitatively different among certain groups of women (in this case immigrant women) in terms of recognition, expression, severity, escape and help seeking [5,59,103–105]. In this paper the use of technology in the form of information ICT or CMC is explored within the context of the various factors that intersect and interact to influence the IPV experience for immigrant battered women in terms of seeking help, escaping or reducing the violence and reducing their isolation among other things. Technology is explored as one other variable that influences immigrant women's IPV survivors' experience. The authors are cognizant of the long debate in the social sciences about the impact of technology on society and the individual [69]. However, the questions at hand as well as the research data collected are focused much more on middle level theorizing and applied problem solving. In time and as the research accumulates the grand theoretical question of the impact technology has on the IPV survivors and service providers generally would be an interesting topic to tackle.

The research on the use of ICT or CMCs by IPV survivors generally and battered immigrant women in particular is almost non-existent. The little that exists suggests that the internet has not empowered women generally and stay-at-home mothers in particular to the extent to which advocates of telework had once hoped. While ICT or CMC has been used to spread information and educate victims about available IPV services in the community [70,117] their impact has not been studied empirically.

The literature on the digital divide has identified clearly that there is gender divide in the use of ICT or CMC [1,76,82]. Women's use of ICT is shaped generally by their gender-role as care-takers and takes on a social/kin relationship, while men's use is less social, and is more directed towards information seeking [50,82]. As such it can be extrapolated that ICT or CMC use for information, education and help-seeking has not been useful because of the patterns of ICT use by females. While some of differences in the use of ICT or CMC (the gender divide) could lead us to extrapolate that ICT or CMC has not been helpful to victims of IPV, there is research that points to other factors that

influence its usage. The digital divide according to the literature is not only influenced by gender but is also influenced by the context of the user including factors such as race, life-cycle, socioeconomic status, language and geographic location [11]. Jakson et al. (2008) show that race influences the usage of ICT or CMC. They noted that African American women use the internet more intensely than African American males. They also found that females, regardless of race, were the most intense users of the cell phone. Ono and Zavodny (2008) [99] have noted that in immigrant populations the immigrant-native gap in ICT or CMC usage is attributable to differences in English ability. Mesch's study (2012, 317) shows that in multicultural societies disadvantaged groups (of whom immigrants are a group) "show greater motivation to use CMC to expand business and occupational contacts, whereas members of the majority group are more motivated to use CMC to maintain existing family and friendships ties".

In view of the various factors that influence the use of ICT or CMC generally, this paper is directed by the complexity/intersectionality of the digital divide and its influence on use. In other words, technology is examined as one of multiple factors that interact to influence the behaviours of battered immigrant women. Moreover, it is guided by Sherman et al.'s (2000) [106] framework, which states, that the ICT or CMC is a social technology in which online behaviors and attitudes are extensions of offline social processes and relationships. These relationships may be influenced by factors such as race, gender, class, immigration status, language, religion, education and geographic location. Power differences occur in technology as they do in society and "online communication patterns may amplify gender differences and miscommunication" and reproduce societal inequities [96, p. 683]. Additionally, technology can be both a "tool of empowerment, support, growth, and liberation" or can involve "harassment, threats, and victimization" so we proceed with an awareness of the "promise and peril" of ICT and CMC for IPV survivors [96, p. 690].

3. Methodology

In this paper a total sample of approximately 49 women who are victims of IPV were recruited from various community partner centres across the Durham and Greater Toronto regions. We compare the experiences of 3 groups of battered women: 1) immigrant women who are newcomers (INC), who have been in Canada for less than 10 years; 2) immigrant women who have been in Canada for more than 10 years (IL10); and 3) Canadian born visible minority women who have experienced IPV (CBVM). Purposive sampling was used to ensure equal representation of each of the 3 groups identified earlier (INC, IL10, CBVM) for individual in-depth interviews and surveys [111]. All interviews and surveys were completed in a private space at those organizations. Each participant received \$35 honorarium for their time and participation in the study. Prior to data collection all research related activities were approved by UOIT's Research Ethics Board (REB). Given the difficulty of access to IPV victims [58,60], the "ideal" achieved sample size of 100 women was not feasible at this point in time.

A qualitative method was used to develop an “empathetic” understanding of experiences surrounding IPV victimization. We tape recorded the conversation between the interviewer and interviewee that was guided by a semi-structured interview. This method allowed researchers to establish rapport and attain high-quality in-depth accounts and narratives from all participants in their own words [29,63,84]. We have chosen this interpretive methodological approach because it was the most suitable for sensitive and complex research topics such as IPV. These data collection methods allowed for individual exploration as well as both group and individual meaningful

interpretations of the opinions and ideas of the research participants [63].

Finally, analysis of the qualitative data utilized an interpretive methodology using grounded theory assisted by N-VIVO software. All tape recorded interviews were transcribed and uploaded to the software for analysis by members of the research team. Research assistants accompanied each interviewer to make detailed notes and observation as the interview took place.

4. Results

4.1. Sample profile (Table 1)

4.1.1. Information communication technology (ICT) and computer mediated communication (CMC)

Preliminary “exploratory” descriptive statistics on a sample of 49 immigrant women indicate that with respect to technological knowledge there was variation in responses by immigrant women, even though 80% had access to a computer. For example, approximately 44% reported their technological knowledge being “not good” (22%) or “average” (22%), compared to 56.1% who viewed their technological knowledge as “good” (24.4%) and “excellent” (31.7%). Approximately 60% claimed to learn technology before the abuse, but there were a handful of immigrant women, 40%, who learned technology after the abuse. With respect to social media, like MSN, Facebook, GTalk and Twitter, the majority of immigrant women (70%) used these forms of social media, compared to only 30% that did not. Interestingly, about 85% of women owned their own private cell phone, only 15% of immigrant women did not, however only 46% indicated that their cell phone helped them to escape the violence; a slim majority (54%) reported that their cell phone did not.

The following in Tables 2 and 3 represent selected narrative responses of participants.

5. Discussion and conclusion

This paper is unique in that it explores how immigrant women in the Canadian context who are IPV survivors access and make use of technology in the form of ICT or CMC. While the limited scholarship on ICT or CMC usage indicates or helps us extrapolate that there is a digital divide and that various socio-demographic factors do play a role in the use of this form of technology, our data does not display a streamlined pattern in this regard. The results are not as neat as some of the existing literature reports. This may be due to the sample size, but it could also be an issue underlying our theoretical understanding of what are the possible important socio-demographic variables impacting immigrant women within the Canadian context. While digital divide theory indicates a direct correlation between technological knowledge, skills and use of the technology, it may be that within the immigrant battered women population the digital divide is different. The data clearly shows that the majority of women participants viewed their technological knowledge as “good” and “excellent” and had access to cell phones and computers, however many of them were not *empowered* by ICT or CMC access or

Table 1

Sample profile with key sociodemographic characteristics.

Agency	Education
<ul style="list-style-type: none"> ■ 60% WMRCC ■ 40% other agencies in GTA/ Durham 	<ul style="list-style-type: none"> ■ 2.4% no schooling at all ■ 12.2% some high school ■ 9.8% completed high school ■ 4.9% some community college ■ 22.0% completed community college ■ 7.3% some undergraduate ■ 34.1% completed undergraduate ■ 2.4% some graduate school ■ 4.9% completed graduate school
Average age of women	
<ul style="list-style-type: none"> ■ 36–41 years old 	
Marital status	
<ul style="list-style-type: none"> ■ 24.4% legally married ■ 19.5% common law ■ 29.3% separated but legally married ■ 22.0% divorced ■ 4.9% separated not legally married 	Household Income
Type of marriage	<ul style="list-style-type: none"> ■ 68.3% \$0–\$24,999
<ul style="list-style-type: none"> ■ 22% arranged marriage ■ 61% love marriage 	Lives with abusive spouse/partner
Ethnicity of IPV survivor	<ul style="list-style-type: none"> ■ 75.6% no ■ 24.4% yes
<ul style="list-style-type: none"> ■ 24.4% Black African Canadian ■ 9.8% Middle Eastern ■ 31.7% South Asian ■ 4.9% East Asian ■ 2.4% Southeast Asian ■ 4.9% Native/Aboriginal ■ 7.3% West Indian ■ 12.1% Hispanic/Latino ■ 2.4% other 	Neglect/abuse as a child
Religious denomination of IPV survivor	<ul style="list-style-type: none"> ■ 68.3% no ■ 29.3% yes
<ul style="list-style-type: none"> ■ 7.3% protestant ■ 17.1% catholic ■ 14.6% other christian ■ 26.8% muslim ■ 17.1% hindu ■ 4.9% agnostic/atheist ■ 12.2% other 	Children
Country of origin	<ul style="list-style-type: none"> ■ 84% yes ■ 16% no
Practice religion	Length of residency in Canada
<ul style="list-style-type: none"> ■ 90.2% not practice religion ■ 9.8% Canada 7.3% do not 	<ul style="list-style-type: none"> ■ 51.2% less than 10 years ■ 48.8% more than 10 years
Access to computer	Current immigration status
<ul style="list-style-type: none"> ■ 20.0% no ■ 80.0% yes 	<ul style="list-style-type: none"> ■ 12.2% immigrant <10 years, no PR card ■ 22.0% immigrant <10 years, PR card ■ 9.8% immigrant >10 years, PR card ■ 9.8% naturalized <10 years ■ 31.7% naturalized >10 years ■ 9.8% Canadian born visible minority ■ 4.9% other
English proficiency	
<ul style="list-style-type: none"> ■ 85.4% English fluent ■ 14.6% not fluent 	

Table 2

Benefit and empowerment through ICT and CMC usage.

Cell phone and technological knowledge assisted in cry for help

013- "yes it did-just recent fight I hold my 013-Cell phone and he was gonna' take my computer away and I said I will call 911"

017-"Technology help me reach the shelter ... when I left him I used my cell phone and call shelter"

014-"I learned computer immediately after my separation-my kids help me ... the cell phone helped me escape my situation and allowed me to call for help ..."

023-"Helped me a lot ... at times when I did not have access to house phone I used cell phone as a way out."

036-" sometimes I would call one of my friends when he would start getting mad and he would not know that the friend was on the phone and my friend would hear all of the verbal abuse."

034-"I always comfortable with technology ... yes I called 911 several time."

049-"Yes it has-the day he was choking me I used it-my son called police on it"

029-"Yes, the cell phone helped me survive my violence! I would tell him I am calling police with it and that would stop him!"

046-"Technology helped my abuse because it gave me knowledge; however some technologies were removed from my life after the abuse, like Facebook-now I am very low key on it. My home phone was used to escape violence."

Expansion or maintenance of social support networks

010 "the cell phone did help because I can call my family and it allowed me to stay connected to my support system"

015-"the cell phone allows me to communicate with people"

036-" sometimes I would call one of my friends when he would start getting mad and he would not know that the friend was on the phone and my friend would hear all of the verbal abuse."

Access to service agencies

016-"Knowledge of technology allowed me to search for shelters and programs." This was important for my survival and well-being".

006 "after I left him I used technology more and searched for things for kids and services."

018-"... but I used it to help find service agencies for help ..."

usage. Interestingly, the data clearly indicated that while most of these women owned their private cell phone, for the majority, their cell phone did not assist in escaping the violence or the abuser.

An exploration of various participants by socio-demographic characteristics clearly indicates that most women who benefitted and empowered themselves through ICT and CMC usage (see Table 2) have had exposure to community colleges and universities (i.e., undergraduate and graduate school). Exposure to higher education reduces the digital divide in ICT and CMC usage among the participants in our sample. Interestingly, most women who reported having obstacles and problems with ICT or CMC usage reported being "religious". This was a repeated theme across those interviews. Hence, within our sample religiosity contributed to the increase of the digital divide and ICT and CMC usage for these battered immigrant women. However, the present sample is not large enough to provide any conclusive results and further investigation of religiosity and the role of ICT or CMC technology generally and in helping survivors in IPV in particular would shed clearer light on this preliminary result.

At the theoretical level future research should focus on sociodemographics characteristics that are not identified clearly in the intersectionality theory framework, including education and religiosity.

Table 3

Obstacles and problems encountered with ICT and CMC usage.

Perpetrator policing of IPV survivor

006- "I just got my cell phone 4 months ago ... husband never bought me one ... I was 10 years without cell phone ... when I questioned it, he would say get it yourself ... I did not feel safe"

010 the cell phone did help because I can call my family and it allowed me to stay connected to my support system ... but sometimes he would check my phone ... it was stressful ..."

013- "just recent fight I hold my cell phone and he was gonna' take my computer away and I said I will call 911 ... he threatens me with computer and he takes my computer cause he wants to share my files and see them ..."

017- " he would check my phone record ... I would be very careful to talk on cell ... I was under scrutiny 24-7 and he knew who I was talking to."

001- ... "cell phone was problematic in our relationship-he would record my conversations and take my phone away from me. My husband did not provide me with cell or home phone. He was always afraid that I would complain or tell on him to my mother. Once, I left I got my own private cell phone permanently".

019-"he would police my conversations ... I did not want a cell phone, I only got a cell phone after shelter ... he did not want me to use cell phone ... he controlled the telephone because he thought my family or mom would convince me to leave ... he would monitor my conversations with mom and she would have to be on speaker during the call ... he was very insecure, the shelter told me that, otherwise I thought he was confident".

036-"he monitored all my phone calls."

Knowledge and access to ICT and CMC technologies is power

010- "I learned technology after my abuse in Canada for knowledge ... my brother's wife gave me cell phone ..."

014-"I learned computer immediately after my separation-my kids help me"

024-"Homeward Program taught us technology and they prepared women for employment searches and to live on her own."

030-"I never had cell phone-I cannot afford!"

045- "I never really knew to use it for violence."

021-"I've always kept a cell phone on me at all times AFTER my abuse ... it did not help me escape the violence because I think he would take my cell phone."

027-"after my abuse I learned more about technology-it helped me escape violence because it increased my knowledge ... it helped me escape violence a few times."

035-"I only got phone at shelter"

036-"I wanted to learn and was enrolled in a technology program but was discouraged by the school because the program only targeted individuals that already had basic technological knowledge."

042-" I did not know computer and I think I should have learned it because it would have empowered me in all different ways-my own ignorance about technology created more suffering for me in the end. I did not even have a cell."

While we have not seen a definitive pattern in terms of survivors using ICT or CMC to seek help or escape the violence of intimate partners in our sample, there are still certain factors about that usage that are worthy of exploring further. The first is the fact that women with more years of formal education benefitted from the use of the technology to access service, and/or escape the violence. Such a result further supports most of the research conducted on empowering women (immigrants, living the developing or the developed world) in multiple ways including economic independence, delaying marital age, gaining control over their bodies in child-bearing decisions, and now maybe using technology to seek help and protection from an abusive intimate partner. More research is required to provide more conclusive statements

regarding the factor of formal education. In addition to having a larger number of participants, further questions including how and why years of education facilitate use of technology become critical to future research. Is it the critical thinking that such education provides? Or is it the sharing of experiences in the formal curriculum, extra-curriculum or informal peer exchanges? Such an exploration can encourage and inform a number of actions at both the K-12 and higher educational institutions to further empower female students to make use of technologies such as ICT and CMC in overcoming IPV.

The second factor in this research that is worth following up on in the future is the relationship between the usage of ICT or CMS and religiosity. This exploratory research shows an emergent pattern, where the women describing themselves as more religious used the technology less frequently than those who did not to access help or services in the face of their IPV experiences. It is worth noting again that the size of our participants sample does not lend us to make any generalizations. However, it is worth mentioning that in the case of religion a number of issues may be contributing to the lack of usage of technology in the case of this sample of immigrant women. This could be attributed to destiny, whether it be *kismet* in the Islamic context, *karma* in Hindu/Buddhist, and simple faith or *God's hand* within Christian context. For example, some women when talking about use of technology stated: "Our faith has brought us here", or "this is God's way", "My God is not that selfish, there will be a way out, my belief believes this". It also could be direct societal values that interpret the use of technology in these instances as blasphemous or sinful. In some countries women have been banned from using the internet or other social media to chat with unrelated male relatives.² In 2010, a Saudi Arabian leader issued a *fatwa* banning women from logging in online without a chaperone sitting at her side.³ It would be interesting to investigate further what other communities of faith promote these negative ideas about ICT or CMC and what the focus of such arguments are.

Future research with a larger number of immigrant and visible minority participants that has a control group of non-immigrant and Caucasian women survivors of IPV would help answer more questions and provide more recommendations. Regardless, this research is an exploratory study of a subject that is clearly understudied and a first step towards understanding immigrant battered women and IPV better. Increasing the accessibility of service information for immigrant women should be a priority for service providers. It is only through further research that we can further explore these issues and how ICT and

CMC might help immigrant IPV survivors gain greater access to the services that can help them.

References

- [1] Abboud R, Antonio M, Claussen C, Hurlock D, Lantion V, Lorenzetti L, Wells L. A context of domestic violence: learning for prevention from the calgary filipino community. *Int J Child Youth Fam Stud* 2013;1:147–65.
- [2] Abu-Ras W. Cultural beliefs and service utilization by battered Arab immigrant women. *Violence Against Women* 2007;13(10):1002–28.
- [3] Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts CH. Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *Lancet* 2006;368(9543):1260–9. [http://dx.doi.org/10.1016/S0140-6736\(06\)69523-8](http://dx.doi.org/10.1016/S0140-6736(06)69523-8).
- [4] West CM, Kantor GK, Jasinski JL. Sociodemographic predictors and cultural barriers to help-seeking behavior by Latina and Anglo American battered women. *Violence Vict* 1998;13(4):361–75.
- [5] Brownridge DA, Halli SS. Explaining violence against women in Canada. Lexington Books; 2001.
- [6] Hass GA, Ammar N, Orloff L. Battered immigrants and US citizen spouses. *Legal Momentum* 2006;24:1–10.
- [7] Bauer HM, Rodriguez MA, Quiroga SS, Flores-Ortiz YG. Barriers to health care for abused Latina and Asian immigrant women. *J Health Care Poor Underserved* 2000;11(1):33–44.
- [8] Crenshaw K. Mapping the margins: intersectionality, identity politics, and violence against women of color. 1994. p. 93–118.
- [9] Cohen M, Maclean H. Violence against Canadian women in National Women's Health Surveillance Report. *JOGC* 2003;25:499–504.
- [10] Ammar NH, Orloff LE, Dutton MA, Hass GA. Battered immigrant women in the United States and protection orders: an exploratory research. *Criminal Justice Rev* 2012. 0734016812454660. <http://dx.doi.org/10.1177/0734016812454660>.
- [11] Kennedy T, Wellman B, Klement K. Gendering the digital divide. *IT Soc* 2003;1(5):72–96.
- [12] Ansara DL, Hindin MJ. Formal and informal help-seeking associated with women's and men's experiences of intimate partner violence in Canada. *Soc Sci Med* 2010;70:1011–8. <http://dx.doi.org/10.1016/j.socscimed.2009.12.009>.
- [13] Atkinson T, Finn J. Promoting the safe and strategic use of technology for victims of intimate partner violence: evaluation of the technology safety project. *J Fam Violence* 2009;24:53–9. <http://dx.doi.org/10.1007/s10896-008-9207-2>.
- [14] Barrett BJ, St Pierre M. Variations in women's help seeking in response to intimate partner violence: findings from a Canadian population-based study. *Violence Against Women* 2011;17(1):47–70. <http://dx.doi.org/10.1177/1077801210394273>.
- [15] Benson LM, Wright EM. Immigration and intimate partner violence: exploring the immigrant paradox. *Soc Probl* 2010;57(3):480–503. Retrieved from:<http://www.jstor.org/stable/10.1525/sp.2010.57.3.480>.
- [16] Berg BL. Qualitative research methods for the social sciences. Boston: Allyn & Bacon; 2004.
- [17] Brownridge DA, Halli SS. Double Jeopardy?: Violence against immigrant women in Canada. *Violence Vict* 2002;17(4):455–71.
- [18] Bruckman AS, Dimond JP, Fiesler C. Domestic violence and information communication technologies. *Interact Comput* 2011;23:413–21. <http://dx.doi.org/10.1016/j.intcom.2011.04.006>.
- [19] Burman E, Smailes SL, Chantler K. 'Culture' as a barrier to service provision and delivery: domestic violence services for minoritized women. *Crit Soc Policy* 2004;24(3):332–57.
- [20] Cohen MM, Du Mont J, Forte T, Hyman I, Romans S. Help-seeking rates for intimate partner violence (IPV) among Canadian immigrant women. *Health Care Women Int* 2005;27:682–94. <http://dx.doi.org/10.1080/07399330600817618>.
- [21] Cohen M, Maclean H. Violence against Canadian women. *BMC women's health* 2004;4(1):S22.
- [22] Crocco M, Cramer J. Technology use, women, and global studies in social studies teacher education. *Contemp Issues Technol Teach Educ* 2005;5(1):38–49.
- [23] Dawson S, Finn J, Fraser C, Southworth C, Tucker S. Intimate partner violence, technology, and stalking. *Violence Against Women* 2007;13:842–56.
- [24] Dutton MA, Ammar N, Orloff L, Terrell D. Use and outcomes of protection orders by battered immigrant women. A report

² In early January for example Iran's Supreme Leader Ayatollah Khamenei has banned unrelated men and women from talking to each other over the internet or on social media. Staff writer, Al Arabiya News. Tuesday, 7 January 2014. <http://english.alarabiya.net/en/life-style/2014/01/07/Iran-s-Khamenei-bans-chatting-between-unrelated-men-and-women.html>.

³ Ahram Online, Sunday 16 Sep 2012. <http://english.ahram.org.eg/NewsContent/2/8/53070/World/Region/Saudi-sheikh-Women-can-log-in-online-without-guard.aspx>.

- submitted to the National Institute of Justice, Washington DC. Washington, D.C: National Institute of Justice Office of Justice Program U.S. Department of Justice; 2007. grant #.2003-WG-BX-1004.
- [59] Dutton MA, Orloff LE, Hass GA. Characteristics of help-seeking behaviors, resources and service needs of battered immigrant Latinas: legal and policy implications. *Geo J Poverty L Pol'y* 2000; 7:245.
- [60] Erez E, Ammar N. Violence against immigrant women and systemic responses: an exploratory study. Washington, D.C: National Institute of Justice Report National Institute of Justice Office of Justice Program U.S. Department of Justice; 2003. grant # 98-WT-VX-0030.
- [63] Esterberg KG. Qualitative methods in social research. Boston: McGraw Hill; 2002.
- [64] Finn J, Banach M. Victimization online: the downside of seeking human services for women on the internet. *Cyberpsychol Behav* 2000;3(5):785–96. <http://dx.doi.org/10.1089/10949310050191764>.
- [67] Glasner J. Gender gap? What gender gap?. 1999. *Wired Online*, 8.
- [69] Habermas J. The theory of communicative action (T. McCarthy, Trans.). Boston: Beacon Press; 1984 (Original work published 1981).
- [70] Hamm S. Information communications technologies and violence against women. *Development* 2001;44(3):36–41.
- [72] Hein D, Ruglass L. Interpersonal partner violence and women in the United States: an overview of prevalence rates, psychiatric correlates and consequences and barriers to help seeking. *Int J Law Psychiatry* 2008;32:48–55.
- [74] Hyman I, Forte T, Mont JD, Romans S, Cohen MM. Help-seeking rates for intimate partner violence (IPV) among Canadian immigrant women. *Health care women Int* 2006;27(8):682–94.
- [76] Imhof M, Vollmeyer R, Beierlein C. Computer use and the gender gap: the issue of access, use, motivation, and performance. *Comput Hum Behav* 2007;23(6):2823–37.
- [81] Kelly UA. Theories of intimate partner violence: from blaming the victim to acting against injustice: Intersectionality as an analytical framework. *Adv Nurs Sci* 2011;34(3):29–51.
- [82] Kennedy T. An exploratory study of feminist experiences in Cyberspace. *CyberPsychology Behav* 2000;3:707–19.
- [83] Klevens J. An overview of intimate partner violence among Latinas. *Violence Against Women* 2007;13:111–22. <http://dx.doi.org/10.1177/1077801206296979>.
- [84] Kotre J. *Outliving the self*. Baltimore. John Hopkins University Press; 1984.
- [89] Mason R, Hyman I, Berman H, Guruge S, Kanagaratnam P, Manuel L. "Violence is an international language": tamil women's perceptions of intimate partner violence. *Violence Against Women* 2008;14(12): 1397–412. <http://dx.doi.org/10.1177/1077801208325096>.
- [91] Menjívar C, Salcido O. Immigrant women and domestic violence common experiences in different countries. *Gend Soc* 2002;16(6): 898–920.
- [96] Morahan-Martin J. Women and the internet: promise and perils. *Cyberpsychology Behav* 2000;3(5):683–91. <http://dx.doi.org/10.1089/10949310050191683>.
- [99] Ono H, Zavodny M. Immigrants, English ability and the digital divide. *Soc Forces* 2008;86(4):1455–79.
- [100] Orloff LE, Dutton MA, Hass GA, Ammar N. Battered immigrant women's willingness to call for help and police response. *UCLA Women's Law J* 2003;13(1). uclalaw.wlj.17773.
- [103] Pratt C, Sokoloff NJ. Introduction to part 1: frameworks and overarching themes. In: Sokoloff NJ, Pratt C, editors. *Domestic violence at the margins: readings in Race, class, gender, and culture*. Piscataway, NJ: Rutgers University Press; 2005.
- [104] Raj A, Silverman JG, McCleary-Sills J, Lui R. Immigration policies increase South Asian immigrant women's vulnerability to intimate partner violence. *J Am Med Women's Assoc* 2005;60(1):26–32.
- [105] Sharma A. Healing the wounds of domestic abuse improving the effectiveness of feminist therapeutic interventions with immigrant and racially visible women who have been abused. *Violence Against Women* 2001;7(12):1405–28.
- [106] Sherman RC, End C, Kraan E, Cole A, Campbell J, Birchmeier Z, Klausner J. The internet gender gap among college students: forgotten but not gone. *CyberPsychology Behav* 2000;3:885–94.
- [109] Smith D, editor. *Social work and evidence-based practice*. Jessica Kingsley Publishers; 2004. Statistics Canada (2003, 2009), <http://www.statcan.gc.ca/start-debut-eng.html>.
- [111] Strauss A, Corbin J. *Basics of qualitative research: grounded theory procedures and techniques*. Newbury Park, CA: Sage; 1990.
- [112] Sumter M. Domestic violence and diversity: a call for multicultural services. *J Health Hum Serv Adm* 2006;29:173–85.
- [113] Tjaden P, Thoennes N. Extent, nature, and consequences of physical violence: findings from the national violence against women survey. *Natl Inst Justice Centers Dis Control Prev* 2000;iii–57.
- [114] Tucker S, Cremer T, Fraser C, Southworth C, Violence ED. A high-tech twist on abuse. *Fam Violence Prev Health Pract* 2005;3: 1–5.
- [115] Volpp L. Feminism versus multiculturalism. In: Sokoloff NJ, Pratt C, editors. *Domestic violence at the margins: readings in race, class, gender, and culture*. Piscataway, NJ: Rutgers University Press; 2005.
- [117] Westbrook L. Digital information support for domestic violence victims. *J Am Soc Inform Sci Technol* 2007;58(3):420–32. <http://dx.doi.org/10.1002/asi>.