Health correlates associated with women's and men's experiences of intimate partner violence in Canada

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ABSTRACT

While the negative health consequences of intimate partner violence (IPV) are well documented, most research has focused on physical violence. However, some researchers argue that failure to consider the extent of coercive control obscures our understanding of the impact of IPV. This study used latent class analysis (LCA) to examine the health consequences associated with different patterns of physical violence, sexual coercion, psychological abuse, and controlling behavior in a Canadian population-based sample of over 15,000 respondents. The findings revealed that experiencing any pattern of physical or non-physical abuse is associated with a range of negative health experiences for both women and men. However, results also documented the increasingly negative effects of IPV for those experiencing more severe patterns of violence and control. This finding was particularly strong for women. These results suggest that the health consequences of IPV is influenced by gender and by the nature of the abuse experienced.

INTRODUCTION

Research on the health consequences of intimate partner violence

Studies have shown that physical and sexual violence by an intimate partner can not only result in physical injury from an assault, it can also result in chronic health problems that can persist after the abuse has ended. The direct health consequences of violence range from bruises, scratches, lacerations, and sprains, to broken bones, chipped or broken teeth, dislocated joints, burns, head or spinal cord injury, and death (Mihorean, 2005; Pottie Bunge, 2002; Tjaden & Thoennes, 1998). Physical or sexual violence is also associated with chronic health problems such as sexually transmitted infections including HIV, poor general health status, bladder or kidney infections, neurologic symptoms including loss of sensation, vision or hearing problems, and paralysis (Brokaw et al., 2002; Coker, Smith, Bethea, King, & McKeown, 2000; Lown & Vega, 2001; Maman, Campbell, Sweat, & Gielen, 2000; Wilbur et al., 2001). Intimate partner violence is also associated with somatic symptoms including chronic pain syndromes, gastrointestinal problems, and cardiovascular symptoms (Coker et al., 2000; Eberhard-Gran, Schei, & Eskild, 2007; Lown & Vega, 2001).

The negative psychological consequences of IPV have also been well documented and include depression, suicidality, symptoms of anxiety including post-traumatic stress disorder, sleeping problems, lowered self-esteem, and feelings of shame or guilt (Bonomi et al., 2006; Golding, 1999; Johnson & Bunge, 2001). Individuals with a history of IPV are also more likely than those without such a history to exhibit negative health practices such alcohol or substance abuse, smoking, having multiple sexual partners, inconsistent condom use, and having a partner with known HIV risk factors (Golding, 1999; Hamburger et al., 2004; Lemon, Verhoek-Oftedahl, & Donnelly, 2002; Wu, El-Bassel, Witte, Gilbert, & Chang, 2003).

Most of the research on the health consequences of IPV has focused on the sequelae of physical violence, and to a lesser extent sexual and psychological abuse. However, many researchers have noted

the limitations of measures that operationalize these experiences as discrete binary events, arguing that the focus of measurement should be the ongoing pattern of violence, abuse, and control. Moreover, recent conceptualizations suggest that IPV may be heterogeneous with respect to the nature and the underlying causes of the violence (e.g., Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2000; Holtzworth-Munroe & Stuart, 1994; Johnson, 1995; Johnson & Ferraro, 2000; Stark, 2006, 2007). Many researchers also argue that making these distinctions within research in terms of the nature of the violence and control is critical to understanding gender differences in the experience and the impact of IPV (Johnson, 2008; Johnson & Ferraro, 2000; Stark, 2007).

While different theories have been proposed to explain this heterogeneity, they suggest at least two patterns of IPV that differentiate between a less severe pattern that is more situationally-specific versus a more chronic and severe pattern that involves high levels of coercive control. For example, Johnson (Johnson, 2008; Johnson & Ferraro, 2000; Stark, 2007) distinguishes between the gender symmetric pattern of situational couple violence and the gender asymmetric pattern of intimate terrorism, the latter of which is hypothesized to be disproportionately perpetrated by men against female partners. Similarly, Holtzworth-Munroe and Stuart (Holtzworth-Munroe et al., 2000; Holtzworth-Munroe & Stuart, 1994) identified a typology of abusive men and distinguished between the family-only batterer, the borderline/dysphoric batterer, and the generally-violent anti-social batter. The family-only batterer perpetrates the least severe levels of psychological, physical, and sexual abuse and the violence is specific to their relationship. In contrast, the generally-violent anti-social batterer perpetrates the most severe levels of psychological, physical, and sexual abuse; they have more generally violent tendencies; they have high scores on anti-social personality as well as high scores on alcohol use. The borderline/dysphoric batterer also perpetrates moderate to severe levels of abuse and is the most psychologically distressed subtype in that he scores high on characteristics such as feelings of jealousy, fear of abandonment, and insecure attachment.

Few studies have attempted to examine the health consequences associated with different types of abusive relationships, although the few that have been conducted have generally documented more deleterious health effects for more chronic violence involving high levels of coercive control than for less severe episodic violence. In one U.S. study, Johnson and Leone (2005) found that women who experienced intimate terrorism were more likely than those who experienced situational couple violence to be injured, to exhibit more symptoms of post-traumatic stress disorder, and to use painkillers. However, there were no differences between the two groups in the use of tranquilizers, antidepressants, or depressive symptoms. In a similar analysis of low income women from Chicago, Leone and colleagues (2004) found that compared to women who experienced situational couple violence, those who experienced intimate terrorism had a higher frequency of seeking treatment for medical injuries, poorer self-rated health, and higher levels of psychological distress.

Two studies, one using national data from the U.S (Carbone-Lopez, Kruttschnitt, & Macmillan, 2006), and the second using national data from Canada (Macmillan & Gartner, 1999), conducted latent class analysis to derive patterns of physical and sexual violence. Both studies identified four classes of IPV: a no violence pattern, an interpersonal conflict pattern involving less severe acts of aggression, a physical aggression pattern involving more varied types of aggression but not severe violence, and a systematic abuse pattern involving severe violence. The Canadian study found no significant differences across the classes in disability status. The U.S. study examined differences across the classes for a wide array of physical health, substance use, and mental health outcomes and generally found more extensive and larger negative health effects for systematic abuse, particularly for mental health outcomes and substance use. The study also found more negative health consequences for women than for men across all classes of IPV.

The objective of this study was to help fill in the gap in our knowledge about the nature and impact of IPV by examining the health consequences associated with different constellations of violence, abuse,

and control and by including both and women and men in the analysis. The health correlates that were examined assess the psychological effects of the violence as well as more general indicators of health status including self-rated health, functional and activity limitations, binge drinking, and use of psychotropic medication.

METHODS

This study used data from Statistics Canada's 2004 General Social Survey (GSS) on Victimization. The GSS is a geographically stratified cross-sectional telephone survey of 23,766 non-institutionalized women and men 15 years of age and over living in the ten provinces. One eligible person in the household was interviewed in either English or French via computer assisted telephone interviewing (CATI). The overall response rate for the survey was 74.5% (Statistics Canada, 2005).

The IPV questions were administered to respondents who reported a current spouse or common-law partner and those who reported an ex-spouse or common-law partner if they had contact with that person in the past five years (n = 15,979). This analysis excluded those with any missing IPV data (n = 376) and those who reported being gay, lesbian, or bisexual (n = 187) since the debate about gender differences in IPV relates to heterosexual unions. The final analytic sample was 15,416 (n = 8,360 women, n = 7,056 men).

Instruments and measures

Intimate partner violence and abuse. The emotional and financial abuse module included seven binary items (i.e., yes/no) assessing various forms of abuse and control. For those reporting about a current partner, the items were worded in the present tense. For those reporting about an ex-partner, the items were worded in the past tense. Respondents were asked if their partner perpetrated any of the following acts:

1) tries (tried) to limit your contact with family or friends
2) puts (put) you down or calls (called) you names to make you feel bad
3) is (was) jealous and doesn't (didn't) want you to talk to other men/women
4) demands (demanded) to know who you are (were) with and where you are (were) at all times
5) harms (harmed), or threatens (threatened) to harm, someone close to you
6) damages (damaged) or destroys (destroyed) your possessions or property
7) prevents (prevented) you from knowing about or having access to the family income, even if you ask (asked)

The physical and sexual violence module included a modified version of the Conflict Tactics Scales (Straus, 1979). These items also had a binary response format (i.e., yes/no). Respondents were asked if their partner perpetrated any of the following acts in the previous five years:

1) threatened to hit you with his/her fist or anything else that could have hurt you
2) thrown anything at you that could have hurt you
3) pushed, grabbed, or shoved you in a way that could have hurt you
4) slapped you
5) kicked you, bit you, or hit you with his/her fist
6) hit you with something that could have hurt you
7) beat you
8) choked you
9) used or threatened to use a gun or knife on you
10) forced you into any unwanted sexual activity, by threatening you, holding you down, or hurting you in some way

Health outcomes

All respondents, regardless of their IPV status, were asked several questions about their health status, substance use, and use of psychotropic medication. Given the small size of some of the patterns of IPV and the low prevalence of some of the health outcomes, all of the health outcomes were defined as binary variables in the analysis.

Functional limitations was assessed with one question: "Do you have any difficulty hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing any similar activities?". A binary variable was created comparing those reporting 'no' difficulty with those reporting that they 'sometimes' or 'often' had difficulty.

Activity limitations was assessed with one question: “Does a physical condition or mental condition or health problem reduce the amount or the kind of activity you can do” at home, at work or at school, or in other activities, for example, transportation or leisure?” A binary variable was created comparing those reporting ‘no’ for all three situations with those reporting limitations ‘sometimes’ or ‘often’ in at least one situation.

Self-rated health was assessed with one question: “In general, would you say your health is: excellent, very good, good, fair, or poor”. A binary variable was created comparing those reporting fair or poor health with those reporting excellent, very good, or good health.

Binge drinking in the last month was assessed with one question: “How many times in the past month have you had five or more drinks on the same occasion?”. A binary variable was created comparing those reporting no binge drinking with those reporting at least one episode in the last month.

Use of psychotropic medication in the past month was assessed with the following three binary (i.e., yes/no) questions: “During the past month, have you used medication or drugs (prescription or over the counter) to help you sleep, help you calm down, and help you get out of depression?”. A binary variable was created comparing those reporting not taking drugs for any of these reasons with those reporting taking drugs for at least one of these reasons.

Psychosocial consequences of intimate partner violence

Respondents who reported at least one act of physical or sexual violence were asked “At the time of the incident(s), how did this experience affect you?” Respondents indicated whether they experienced each of the following reactions: not much, angry, upset/confused/frustrated, hurt/disappointment, fearful, afraid for their children, more cautious/aware, shock/disbelief, victimized, sleeping problems, depression/anxiety attacks, ashamed/guilty, lowered self esteem, increased self-reliance, problems relating to men/women.

Statistical analysis

Latent class analysis (LCA) was conducted using Mplus version 5.1 (Muthen & Muthen, 1998-2006) to identify the patterns of violence, abuse, and control. Separate analyses were conducted for women and men given that a previous analysis documented gender differences in these experiences (Ansara & Hindin, in press). A six-class model was found for women (Table 1), while a four class model was found for men (Table 2). A detailed description of the methods that were used to identify the latent class models can be found in that paper. To examine the health correlates associated with the different patterns of IPV, the latent class models were re-run using the auxiliary variable function in Mplus. This procedure estimates the proportion of individuals in the classes who reported each of the health-related experiences. It also tests for differences in these experiences across the classes using chi-square tests. An overall chi-square test is provided as well as bivariate chi-square tests of each class against every other class. For the analysis that examines the more general health outcomes (i.e., self-rated health, binge drinking, activity limitations, functional limitations, use of psychotropic medication), both the overall and the bivariate chi-square tests are presented. For the analysis of the psychosocial consequences of IPV, only the bivariate chi-square tests for the classes involving physical or sexual violence are presented since respondents who did not report any physical or sexual violence were not asked these follow-up questions.

RESULTS

Women's and men's experiences of violence, abuse, and control

This section describes women's (Table 1) and men's (Table 2) experiences of physical violence, sexual coercion, psychological abuse, and controlling behaviour. These results were originally published elsewhere (Ansara & Hindin, in press). The last row in the tables describes the proportion of women and men who experienced each of the patterns. The other entries in the tables are conditional probabilities

and describe the probability of reporting the items given that a respondent is in that particular class. These probabilities define the nature of the IPV pattern. Overall, there was more variation in the patterns of violence and abuse reported by women than by men. Six classes of violence, abuse, and control were found for women, while four classes were found for men.

For women (85.1%) and men (90.3%), the largest class represents “No violence or abuse”. Individuals in this class generally did not report any experience of violence, abuse, or control by their partner. The second most common class for women (8.1%) and men (5.3%), called “Jealousy/verbal abuse” is primarily defined by acts such as the partner putting them down or calling them names and the partner being jealous of other women/men or demanding to know who they’re with and where they are at all times. Roughly one in four women and half of men in this subgroup also reported that their partner limited their contact with family and friends.

The third most common class experienced by women (2.6%) and men (2.8%) was “Physical aggression”. This pattern is the least chronic and least severe of the violence-related patterns that were documented for women and men. It primarily involves the partner having thrown something at them, pushed, grabbed, or shoved them, or slapped them. For women, roughly half of the respondents in this class also reported verbal abuse and half reported that their partner threatened them with violence. For men, roughly half reported having been kicked, bit, or hit with something, and half reported that their partner threatened them with violence. However, for both women and men, this pattern generally does not involve any of the controlling behaviours. The previous analysis also found that the aggression in this class was relatively infrequent for both women and men, with the majority of respondents (64%) reporting one episode in the past five years.

For women, the fourth class represents the most severe and chronic pattern of violence, abuse, and control documented in the study (1.8%) The majority of women in this “Severe violence, control, verbal abuse” subgroup reported having been beaten/choked, most other acts of violence, threats of violence,

as well as a range of threatening and controlling behaviours. Roughly 32% of women in this class also reported that their partner used or threatened to use a gun or knife on them and 39% reported unwanted sexual activity. The majority of women in this class (70%) reported five or more episodes of violence in the past five years (Ansara & Hindin, in press).

For women, the fifth class ("Physical aggression, control, verbal abuse") represents an intermediate violence pattern between the physical aggression class and the severe violence class (1.3%). This intermediate aggression pattern involves the least severe acts of physical violence (thrown something, pushed/grabbed/shoved, slapped) as well as many of psychologically abusive and controlling behaviours.

For men, the last class ("Moderate violence, control, verbal abuse") involves minor and moderate acts of violence including having been kicked, bit, or hit with a fist or something that could hurt as well as acts of psychological abuse and control (1.5%). While the majority of men in this class reported five or more episodes of violence in the past five years (55%), a notable proportion reported 2-4 episodes (22%) (Ansara & Hindin, in press).

For women, the last class ("Control, verbal abuse") involves verbal abuse and a range of controlling behaviours but does not involve acts of physical or sexual violence (1.1%). The majority of these women reported severe forms of threatening and controlling behaviours by their partners including damaging/destroying their property, threats to harm others or actually harming someone close to them, limiting contact with family and friends, and monitoring their whereabouts and who they spend time with. Over half of women in this class also reported that their partner prevented them from having access to or knowing about the family income.

Negative health experiences and intimate partner violence

For women, there were statistically significant differences across the classes for all of the negative

health experiences (Table 3). Women who experienced any pattern of physical or non-physical abuse reported poorer health across most or all of the measures. However, some of the largest effects were found for women who experienced the most severe pattern of violence and control. Compared to women in the no violence class, women in the severe violence class were at least twice as likely to report all of the negative health experiences. For men, there were statistically significant differences across the classes for three of the health measures: functional limitations, binge drinking, and use of psychotropic medication (Table 4). These findings also show that the experience of any pattern of abuse is associated with poorer health. There was a tendency for men in the moderate violence and control class to report these experiences either more frequently than men in some of the other abuse classes or at comparably high levels.

Psychosocial consequences of intimate partner violence

This analysis only includes the classes involving physical or sexual violence since these questions were only asked of respondents who reported physical or sexual violence. Only between 4% of women in the moderate and severe violence classes and 6.6% of women in the physical aggression class reported that the violence had no effect on them (Table 5). In contrast, 31.3% of men in the physical aggression class reported that the violence had no effect on them compared with 16.0% of men in the moderate violence class (Table 6).

For women, there were statistically significant differences across the classes for most of the items, with those in the severe violence and control class being the most likely to report these experiences and those in the physical aggression class being the least likely to do so. Women in the intermediate violence class tended to fall in the mid-range for many of these experiences, although the nature of this effect varied across the items. For men, there were also statistically significant differences across the classes

for most of the reactions, with those in the moderate violence class being more likely than those in the physical aggression class to report these experiences.

Although the nature of the violence in the physical aggression class was similar for women and men in terms of the types of aggressive acts and the frequency of the violence (see Ansara & Hindin, in press), women in this class were more likely than men to report most of the negative reactions. Of all of the respondents in the study, men in the physical aggression class were generally the least likely to have endorsed the items, while women in the severe violence class were the most likely to have done so.

DISCUSSION

The results of this study suggest that experiencing any pattern of physical or psychological abuse by an intimate partner is associated with negative health outcomes for both women and men. However, the analysis also demonstrates the value of differentiating between patterns of IPV by documenting the increasingly negative health effects for those who experience more severe patterns of violence and control. These findings were particularly strong for women who experienced the most severe pattern of violence and control. In general, the magnitude of the health effects, particularly the psychosocial health reactions, was stronger for women than for men. Men were more likely than women to report that the violence had no effect on them and were generally less likely than women to report many of the negative reactions. These results suggest that the impact of IPV is greater for women than for men because 1) the violence and control they experience is, on average, more severe than the violence and control experienced by men, and 2) women are more negatively affected with similar experiences of IPV. The latter point is illustrated, for example, with the physical aggression class where women were more likely than men to report virtually all of the psychosocial reactions.

The results of the health experiences analysis generally showed smaller differences across the classes for both women and men, possibly owing to the cross-sectional nature of the data. Consequently, it was

not possible to determine the temporal relationship between IPV and these outcomes. It is possible that IPV may cause poor health. Alternatively, those with physical limitations or poor health may be more susceptible to IPV or may be less able to escape or stop the violence. A third explanation is that other factors that are related to both IPV and poor health may explain their association.

A limitation of the study is that data were only available on respondent's victimization experiences. Data on both perpetration and victimization would likely have improved the measurement of IPV by better specifying the nature and the mutuality of violence, abuse, and control within the relationship. Improved measurement of IPV could, in turn, have also improved the estimation of the health consequences of IPV for those affected. There was also limited information in the survey to examine the health consequences for those experiencing patterns of non-physical abuse. This limitation was most apparent for the pattern of coercive control that was documented for women. Future research would benefit from collecting relevant follow-up information from all respondents who report any experience of physical or psychological abuse.

Future research should also explore the extent to which the different patterns of IPV that were identified and the health consequences associated with these patterns generalize to other settings. The debate about the appropriate measurement of IPV and gender differences in the nature of IPV has primarily taken place within the United States, Canada, and the U.K. Questions remain about the extent to which these findings generalize to other countries or settings, including those with different gender norms.

In conclusion, the results of this study provide a more nuanced picture of the health correlates of IPV for those experiencing different patterns of violence, abuse, and control. Making these distinctions within research could help better identify the health, social, and service needs for those experiencing different patterns of IPV and could improve the public health response to IPV by developing programs and services that are tailored to the address the different forms of IPV.

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Table 1. Six-class model of intimate partner violence and abuse by a current or ex-spouse or common-law partner for women (n = 8,355); 2004 Canadian General Social Survey

IPV items	Class I No violence or abuse	Class II Jealousy, verbal abuse	Class III Physical aggression	Class IV Severe violence, control, verbal abuse	Class V Physical aggression, control, verbal abuse	Class VI Control, verbal abuse
Limits contact with family/friends	0.005	0.234	0.031	0.776	0.820	0.911
Puts you down/calls you names	0.014	0.706	0.563	0.994	0.939	1.000
Jealous; Know who you're with/where you are	0.025	0.493	0.298	0.860	0.888	0.985
Harms/threatens to harm someone close	0.000	0.099	0.018	0.585	0.395	0.747
Damages/destroys possessions/property	0.000	0.165	0.215	0.748	0.526	0.775
Prevents knowing about/access to income	0.002	0.198	0.106	0.439	0.333	0.582
Threatened to hit with fist/anything else	0.001	0.031	0.520	0.980	0.553	0.037
Thrown anything; Push/grab/shove; Slap	0.006	0.050	0.919	1.000	0.860	0.000
Kick/bit/hit with fist; Hit with something	0.000	0.000	0.255	0.878	0.138	0.000
Beat; Choke	0.000	0.000	0.136	0.818	0.000	0.000
Used/threatened to use gun/knife	0.000	0.003	0.039	0.317	0.058	0.000
Unwanted sexual activity	0.000	0.013	0.038	0.386	0.169	0.000
Class prevalence	0.851	0.081	0.026	0.018	0.013	0.011

Table 2. Four-class model of intimate partner violence and abuse by a current or ex-spouse or common-law partner for men (n = 7,053); 2004 Canadian General Social Survey

IPV items	Class I No violence or abuse	Class II Jealousy, verbal abuse	Class III Physical aggression	Class IV Moderate violence, control, verbal abuse
Limits contact with family/friends	0.009	0.515	0.078	0.727
Puts you down/calls you names	0.013	0.666	0.323	0.927
Jealous; Know who you're with/where you are	0.067	0.735	0.430	0.924
Harms/threatens to harm someone close	0.000	0.103	0.000	0.436
Damages/destroys possessions/property	0.002	0.185	0.065	0.713
Prevents knowing about/access to income	0.001	0.072	0.005	0.353
Threatened to hit with fist/anything else	0.000	0.033	0.574	0.880
Thrown anything; Push/grab/shove; Slap	0.010	0.097	0.830	0.993
Kick/bit/hit with fist; Hit with something	0.001	0.012	0.466	0.868
Beat; Choke	0.000	0.000	0.044	0.325
Used/threatened to use gun/knife	0.000	0.007	0.013	0.280
Unwanted sexual activity	--	--	--	--
Class prevalence	0.903	0.053	0.028	0.015

-- variable excluded due to the small number of men reporting this experience

Table 3. Proportion of women in the latent classes reporting negative health experiences; 2004 Canadian General Social Survey

Health experiences	All women (n = 8,355)		Latent classes												
			No violence or abuse (a)		Jealousy, verbal abuse (b)		Control, verbal abuse (c)		Physical aggression (d)		Physical aggression, control, verbal abuse (e)		Severe violence, control, verbal abuse (f)		
	n	%	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	χ^2 P-value
Functional limitations	1,573	17.8	16.9[bcf]	(15.9-17.9)	22.2[a]	(18.3-26.1)	28.5[a]	(18.1-38.9)	21.0	(15.1-26.9)	20.1	(11.5-28.7)	29.7[a]	(21.9-37.5)	0.003
Activity limitations	1,112	12.1	11.1[bcf]	(10.3-11.9)	17.4[a]	(13.9-20.9)	24.0[a]	(14.2-33.8)	15.3	(9.8-20.8)	16.1	(8.5-23.7)	22.7[a]	(15.4-30.0)	<0.001
Fair or poor health	1,013	11.6	10.6[bcf]	(9.8-11.4)	16.0[ac]	(12.5-19.5)	29.7[abde]	(19.3-40.1)	14.7[c]	(9.6-19.8)	14.7[c]	(7.4-22.0)	22.0[a]	(14.9-29.1)	<0.001
Binge drinking	1,148	13.5	12.2[bdef]	(11.4-13.0)	18.1[adf]	(14.4-21.8)	19.2	(10.2-28.2)	25.7[ab]	(19.4-32.0)	22.5[a]	(13.9-31.1)	29.6[ab]	(21.8-37.4)	<0.001
Used medication	1,607	18.5	16.5[bdef]	(15.5-17.5)	31.3[a]	(27.0-35.6)	26.3	(16.1-36.5)	28.3[a]	(21.6-35.0)	26.8[a]	(17.8-35.8)	37.0[a]	(28.8-45.2)	<0.001

a, b, c, d denote significant difference between the two classes at P<0.05 (based on the chi-square test)

Table 4. Proportion of men in the latent classes reporting negative health experiences; 2004 Canadian General Social Survey

Health experiences	All men (n = 7,053)		Latent classes: No Violence or abuse (a)		Jealousy, verbal abuse (b)		Physical Aggression (c)		Moderate violence, control, verbal abuse (d)		
	n	%	%	95% CI	%	95% CI	%	95% CI	%	95% CI	χ^2 P-value
Functional limitations	1,441	19.1	18.5[b]	(17.5-19.5)	26.2[a]	(21.1-31.3)	22.3	(16.0-28.6)	25.6	(17.0-34.2)	0.04
Activity limitations	910	11.7	11.2[bd]	(10.4-12.0)	16.0[a]	(11.7-20.3)	14.2	(8.9-19.5)	21.0[a]	(13.0-29.0)	0.11
Fair or poor health	848	11.1	10.7[d]	(9.9-11.5)	14.5	(10.4-18.6)	11.5	(6.8-16.2)	20.8[a]	(12.8-28.8)	0.12
Binge drinking	2,076	29.8	28.7[bcd]	(27.5-29.9)	35.4[ac]	(29.9-40.9)	47.7[ab]	(40.1-55.3)	42.0[a]	(32.2-51.8)	<0.001
Used medication	774	10.5	9.8[bcd]	(9.0-10.6)	15.8[a]	(11.5-20.1)	16.2[a]	(10.5-21.9)	23.4[a]	(15.0-31.8)	0.04

a, b, c, d denote significant difference between the two classes at P<0.05 (based on the chi-square test)

Table 5. Proportion of women in the latent classes reporting psychosocial reactions to the violence; 2004 Canadian General Social Survey

Psychosocial reaction	Women reporting any physical or sexual violence (n = 676)		Latent classes						χ^2 P-value		
			Physical aggression (a)		Physical aggression, control, verbal abuse (b)		Severe violence, control, verbal abuse (c)				
	n	%	%	95% CI	%	95% CI	%	95% CI	a vs. b	b vs. c	a vs. c
Not much	40	6.3	6.6	(3.1-10.1)	3.8	(0.1-7.5)	4.1	(1.0-7.2)	0.29	0.90	0.31
Annoyed	75	10.6	8.5	(4.6-12.4)	7.6	(2.3-12.9)	14.1	(8.4-19.8)	0.80	0.12	0.12
Angry	277	38.3	35.1	(28.2-42.0)	32.9	(23.3-42.5)	40.7	(32.5-48.9)	0.72	0.24	0.31
Upset, confused, frustrated	265	38.0	32.4	(25.7-39.1)	37.2	(27.4-47.0)	44.8	(36.6-53.0)	0.43	0.26	0.02
Hurt, disappointment	193	25.9	20.5	(14.6-26.4)	26.0	(17.4-34.6)	36.0	(28.0-44.0)	0.31	0.11	0.003
Fearful	231	31.0	21.6	(15.9-27.3)	30.9	(21.7-40.1)	47.8	(39.6-56.0)	0.10	0.009	<0.001
Afraid for children	80	10.0	3.4	(0.9-5.9)	12.3	(5.8-18.8)	20.7	(14.0-27.4)	0.01	0.08	<0.001
More cautious or aware	129	16.2	12.0	(7.5-16.5)	15.3	(8.0-22.6)	23.3	(16.2-30.4)	0.48	0.13	0.009
Shock or disbelief	135	16.9	14.0	(9.1-18.9)	16.2	(8.8-23.6)	19.1	(12.4-25.8)	0.64	0.58	0.23
Victimized	111	12.8	6.4	(2.9-9.9)	12.7	(6.0-19.4)	25.4	(18.1-32.7)	0.11	0.01	<0.001
Sleeping problems	124	15.7	7.7	(4.0-11.4)	18.4	(10.8-26.0)	28.6	(21.2-36.0)	0.01	0.07	<0.001
Depression, anxiety attacks	168	21.4	13.2	(8.5-17.9)	23.9	(15.5-32.3)	34.1	(26.3-41.9)	0.03	0.09	<0.001
Ashamed, guilty	93	12.3	6.8	(3.1-10.5)	9.1	(3.2-15.0)	23.0	(16.1-29.9)	0.54	0.004	<0.001
Lowered self esteem	140	17.8	9.5	(5.4-13.6)	16.3	(9.0-23.6)	36.0	(28.2-43.8)	0.12	<0.001	<0.001
Increased self-reliance	64	8.0	5.0	(1.9-8.1)	5.9	(1.0-10.8)	14.6	(8.7-20.5)	0.76	0.03	<0.006
Problems relating to men	60	7.8	2.9	(0.5-5.3)	8.4	(2.7-14.1)	17.6	(11.3-23.9)	0.09	0.04	<0.001

Table 6. Proportion of men in the latent classes reporting psychosocial reactions to the violence; 2004 Canadian General Social Survey

Psychosocial reaction	Men reporting any physical or sexual violence (n = 455)		Latent classes				χ^2 P-value
			Physical aggression		Moderate violence, control, verbal abuse		
	n	%	%	95% CI	%	95% CI	
Not much	130	31.5	31.3	(24.0-38.6)	16.0	(8.7-23.3)	0.004
Annoyed	31	6.5	5.3	(2.0-8.6)	11.6	(5.5-17.7)	0.08
Angry	115	25.3	21.6	(15.3-27.9)	31.3	(22.5-40.1)	0.08
Upset, confused, frustrated	140	29.2	24.4	(17.9-30.9)	37.0	(27.6-46.4)	0.03
Hurt, disappointment	62	10.7	7.1	(3.2-11.0)	19.8	(12.2-27.4)	0.004
Fearful	16	4.0	2.8	(0.3-5.3)	8.5	(3.0-14.0)	0.08
Afraid for children	--	--	--	--	--	--	--
More cautious or aware	29	6.7	4.6	(1.5-7.7)	12.6	(6.1-19.1)	0.03
Shock or disbelief	65	12.5	12.3	(7.4-17.2)	13.4	(6.7-20.1)	0.81
Victimized	23	4.1	2.5	(0.1-4.9)	8.1	(2.8-13.4)	0.06
Sleeping problems	22	4.1	2.4	(0.0-4.8)	8.5	(3.0-14.0)	0.05
Depression, anxiety attacks	48	8.3	5.1	(2.0-8.2)	18.6	(11.2-26.0)	0.001
Ashamed, guilty	18	3.1	2.7	(0.3-5.1)	5.4	(1.1-9.7)	0.28
Lowered self esteem	22	3.7	2.2	(0.0-4.4)	8.1	(2.8-13.4)	0.04
Increased self-reliance	--	--	--	--	--	--	--
Problems relating to men	--	--	--	--	--	--	--

-- data not presented due to the small number of men reporting this experience