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Western Arthur Labatt Family School of Nursing

ANALYSIS OF INTIMATE PARTNER VIOLENCE DATA

FROM THE 2018 SURVEY OF SAFETY IN PUBLIC AND PRIVATE SPACES

TECHNICAL REPORT

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EXECUTIVE SUMMARY

Background

A limitation of current approaches to measuring intimate partner violence (IPV) in Canada has been reliance on questions, in national surveys, that focus on individual acts of violent or aggressive behaviours ranging from single experiences of relatively low severity acts (such as name-calling and shoving) to frequent experiences of severe violence (such as strangulation and stalking). A failure to acknowledge that IPV occurs in patterns and a lack of attention to the context in which violence occurs has led to a "de-gendering" of IPV in extant Canadian data; this has been a key critique of items based on the Conflict Tactics Scale, such as those used in Statistics Canada's General Social Survey – Victimization (GSS-V).

The Composite Abuse Scale Revised-Short Form (CASr-SF) is a comprehensive measure designed to address these limitations. It assesses a broad range of types of IPV (e.g., physical, sexual, psychological, financial, and coercive control) and both the lifetime and past year occurrence and severity of these experiences among different genders. Further, it accurately captures different patterns of IPV that vary in intensity and impact. The CASr-SF is now being used in a number of population surveys and other studies in multiple countries, including in the 2018 Survey of Safety in Public & Private Spaces (SSPPS).

Purpose

The overall research questions for this project were:

1. How does the CASr-SF perform in the SSPPS, a population-based sample of Canadians? How does it compare to questions traditionally used in such surveys based on the Conflict Tactics Scale?
2. How should the CASr-SF be scored to allow classification of IPV experiences by severity?
3. How do Canadians of different genders and socio-demographic characteristics report experiencing IPV and its impacts?
4. How do IPV experiences relate to other experiences of violence, and to physical and mental health and well-being?

Method

Exploratory factor analysis was used to assess the performance of the CASr-SF including how items grouped according to specific types of IPV, allowing us to determine the sub-scales of the CASr-SF. Latent class analysis (LCA), which groups people in the sample according to their responses to CASr-SF items, was used to determine patterns of abuse – i.e., how individuals' abuse experiences clustered into different groupings by type and severity of abuse experienced. The LCA results were further used to develop a scoring classification approach, which allowed us to determine the prevalence of IPV overall and by specific sub-groups. Correlations and cross-tabulations were used to compare CASr-SF items to GSS-V items to determine whether the latter provide unique and important information regarding Canadians' IPV experiences.

Key Findings

The following summarizes our key findings, according to our research questions and study objectives. Given the large sample included in the SSPPS, these findings should be generalizable to the broader population of Canadians experiencing, and not experiencing, IPV.

- The CASr-SF identifies 3 sub-types of IPV: psychological, physical and sexual abuse. These sub-scales, or factors, are the same for both men and women; analyses according to non-binary or other gender identities was not possible due to small sample sizes. This is a pressing research gap.
- Comparison of data from the CASr-SF items to items modified from the GSS-V indicates that the CASr-SF captures all relevant information about abusive experiences (i.e., the two sets of items are highly inter-correlated). Thus, when the CASr-SF is used, the GSS-V items do not add any additional information about IPV experiences in large population-based surveys. Further, the CASr-SF captures unique aspects of IPV in the areas of stalking, isolation from family and friends, sexual coercion and forced sex, financial abuse, and choking/strangulation.
- Our scoring approach identifies those meeting a threshold of experiences consistent with empirical and theoretical understandings of IPV victimization, while excluding those experiencing lower levels of aggression, often termed "situational couple violence". This is an important addition to the literature as it will assist in identifying adults experiencing IPV, who require different policy and service responses, compared to those in poor relationships, who might need different interventions.
- Using our scoring approach, we found that 91.6% of this sample of Canadians 19 years and older reported no IPV in the past year, 5.4% reported experiencing some abusive behaviours but did not meet the scoring threshold (i.e., Subthreshold IPV), and 3.0% of the sample reported experiences that met the threshold for IPV ("IPV Positive"). Further, sub-group analyses revealed that:
  - Based on their reports of past-year IPV, the following groups were more likely to be in the "Subthreshold IPV" and "IPV Positive" categories, versus the "No IPV" category: women, Indigenous Peoples, non-visible minority respondents, those born in Canada, those facing economic difficulties in the past year, and those reporting any employment in the past year.
  - All forms of non-IPV violence experiences across the lifespan (i.e., childhood assault and exposure to violence in the home, and non-partner sexual and physical assault since age 15) were strongly related to past-year IPV experiences.
  - All forms of mental health concerns were strongly related to past-year IPV experiences.
- Five distinct patterns of IPV experiences, with increasing levels of severity, were identified:

  Pattern/Class 1: lower intensity psychological abuse, characterized mainly by insults; 37% of those experiencing IPV were in this class, i.e., they predominantly experienced this pattern of abuse.

  Pattern/Class 2: a mixed pattern of psychological and sexual abuse where the most dominant items relate to forced sex, sexual humiliation, sexual and other insults, harassment and isolation (18%).

  Pattern/Class 3: psychological and physical abuse, including hitting, throwing, shaking, grabbing, insults, put downs and harassment (12%).

  Pattern/Class 4: higher intensity psychological abuse and coercive control including stalking, harassment, higher levels of insults and isolation (24%).

  Pattern/Class 5: intense on all types of abuse (8%).

- These patterns are highly gendered, with more women than men in classes 1, 2 and 4 and more men in class 3. The most severe pattern (class 5) contained twice as many women as men.
- Age was also an important factor; those who experienced low levels of psychological abuse (class 1) were older, while those experiencing sexual abuse (class 2) and the most severe forms of abuse (class 5) were younger.
- Moving across the abuse classes (from class 1 to class 5), we observed increasing rates of mental health concerns (with some minor exceptions) as well as increasing scores on the CASr-SF (i.e., more types and/or frequency of abuse).

Conclusions & Recommendations

For measuring and reporting on IPV experiences:

The 16-item CASr-SF is a robust measure of IPV experiences among Canadian adults that differentiates patterns of abuse experiences and distinguishes IPV from lower-level aggression or conflict. It is capable of capturing variation in IPV across important dimensions, including gender, age, financial strain and other aspects of identity, and related health concerns. In Canadian population surveys, including the SSPPS, the CASr-SF should be used without additional questions from the General Social Survey – Victimization (GSS-V).

We therefore recommend that future cycles of the SSPPS do not include the GSS-V items. Furthermore, we encourage the addition of questions asking about the gender of the partner(s) responsible for, especially, past-year IPV, as we know from other research that perpetrator gender is an important consideration, especially when assessing IPV severity and patterns of abuse. We strongly recommend strategies to over-sample for inclusion of gender identities that are not "man" or "woman" as current small cell sizes preclude release of these data by Statistics Canada.

For policy and program development:

Policy and program development must consider differential experiences and consequences of IPV among different groups, taking an intersectional approach. We recommend that the scoring approach outlined in this report to classify respondents according to their level of IPV severity be used to develop policies and services tailored to people's violence experiences, as well as their individual needs and contexts. This means, especially, recognizing that people classified as "IPV Positive" are generally experiencing ongoing physical, sexual and/or emotional violence with commensurate health and social impacts, including on income and work. IPV-specific interventions must be -trauma- and violence-informed, survivor-centric and prioritize safety and survivor agency. Interventions for those in the "Sub-threshold IPV" category might be quite different, with a focus on healthy relationship behaviours.

Finally, it is crucial to understand that while we report on experiences between and among certain groups, IPV is a problem with root causes based in our beliefs and norms about gender and gender roles, and these intersect with social and structural conditions, including access to social determinants of health such as income and housing, that place some groups, especially women and gender non-binary people, at greater risk of violence. Thus, these data should not be used to reinforce stereotypes about specific groups, but to illuminate the social norms and policy actions that require change to better support those placed at greatest risk.

BACKGROUND & PURPOSE

A limitation of current approaches to measuring intimate partner violence (IPV) in Canada has been reliance on questions, in national surveys, that focus on individual acts of violent or aggressive behaviours ranging from single experiences of relatively low severity acts (such as name-calling and shoving) to frequent experiences of severe violence (such as strangulation and stalking). A failure to acknowledge that IPV occurs in patterns (M. Johnson, 2011) and lack of attention to the context in which violence occurs has led to a "de-gendering" of IPV in extant Canadian data; this has been a key critique of items based on the Conflict Tactics Scale, such as those used in Statistics Canada's General Social Survey – Victimization (GSS-V) (H. Johnson, 2015).

The Composite Abuse Scale (CAS) is a 30-item research measure that asks a comprehensive set of questions regarding specific experience of abusive acts (Hegarty et al., 1999; Hegarty et al., 2005). A strength of the CAS is that it covers a range of acts that are included in a broad definition of IPV proposed by the World Health Organization: "behaviour within an intimate relationship that causes or has the potential to cause physical, sexual, or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse, and controlling behaviours" (WHO, 2010). The CAS addresses many methodological limitations of other IPV measures (Hegarty et al., 2005). However, the CAS has also been critiqued for its length (30 or 31 items, depending on the version used) and for its scoring approach.

To address these concerns, and to update the CAS more generally, we developed the Composite Abuse Scale Revised-Short Form (CASr-SF) to measure severity of IPV in national and population surveys and in studies on IPV more generally (Ford-Gilboe, Wathen, et al., 2016). The development of this brief 15-item measure included input from 31 international IPV experts who examined the CAS and provided feedback related to gaps or redundancies and the overall importance, clarity and appropriateness of the items for diverse groups of women. Secondary analysis of data from 6,278 adult Canadian women pooled from five IPV studies that included use of the original 30-item CAS (and, in some cases, a 31st item specific to choking/strangulation) was also completed to create and validate the short scale. Based on this analysis, the revised measure includes 12-items from the original CAS and three new items intended to address critical gaps and better align with current thinking in the field, making the new tool capable of producing better quality data (Ford-Gilboe et al., 2016). A parallel consultation process led by the Public Health Agency of Canada, regarding, in particular, men's experiences of IPV, also identified a potential gap in the CAS related to the use of tactics that focus on sexual humiliation. Therefore, a 16th 'test item' was developed during this process and included in ongoing evaluation of the CASr-SF.

The CASr-SF measures a broad range of types of IPV (e.g., physical, sexual, psychological, financial, and coercive control) and assesses the severity of these experiences. Our recent study with a community sample of 800+ adults who reported experiencing IPV in the previous 12 months showed that the CASr-SF is a reliable and valid measure for both men and women (Ford-Gilboe et al., forthcoming); further, it accurately captures different patterns of IPV that vary in intensity and impact, as assessed by evaluating their relationship with specific health outcomes, including post-traumatic stress and depressive symptoms.

The CASr-SF is now being used in many studies and large-scale surveys in multiple countries, including in the 2018 Survey of Safety in Public & Private Spaces (SSPPS). Large-scale Canadian data from the SSPPS using the CASr-SF, alongside IPV questions drawn from Statistics Canada's General Social Survey – Victimization (GSS-V), provide the opportunity to further assess the performance of the CASr-SF across genders and violence types, and to generate insights regarding the utility of both CASr-SF and GSS-V questions for future iterations of the SSPPS.

We therefore analyzed IPV data in the SSPPS to meet the following objectives:

1. Examine the properties and performance of the CASr-SF.
2. Determine the patterns of IPV identified by the CASr-SF.
3. Develop an approach to scoring the CASr-SF to best identify and classify those experiencing abuse and violence, while excluding those experiencing lower-level aggression not meeting the threshold of intimate partner violence, as empirically determined.
4. Examine experiences of IPV overall and by specific groups.
5. Compare the added value of including both CASr-SF and GSS-V items.

FINDINGS

Objective 1: Properties & Performance of the CASr-SF

Describe the properties and performance of the CASr-SF as used in the SSPPS, by examining the factor structure of the 16 item CASr-SF.

METHODS

Supplementary Tables 1 and 2 (see Appendix 1) outline the variables being used to answer our research questions. We were interested in the entire population, and then specific sub-groups known to diverge on experiences of IPV (by gender, race/ethnicity, etc.). Since no public data are yet available, we examined samples sizes of specific groups to assess adequacy of power for these analyses. In some cases, small cell sizes meant we were unable to complete specific sub-group analyses, including for gender minority groups. We were also unable to examine IPV in same sex relationships due to lack of a partner gender variable.

All analyses included adults aged 19+ to exclude youth experiencing, for example, dating violence. We did not disaggregate by region, province or territory. Statistics Canada does not release actual sample sizes, but rather weights are used to make the results reflective of the population distribution rather than the observed distribution in the sample.

After finalizing the variables to be examined and reviewing, for the first phase of analysis, the 16 CASr-SF items and their frequencies/distributions to assure they met the assumptions of our planned analyses, we explored the pattern of missing data and considered how best to account for this based on observed patterns. Items with a high number of missing responses are important to consider when examining the psychometric properties of the scales. Exploratory Factor Analysis (EFA, common factor model with oblique rotation) was used (in STATA) to assess how items loaded on theoretical constructs of IPV types: psychological, physical and sexual. We examined the factor structure overall and for men and women as groups.

Factor loadings reflect the strength of the relationship between an individual item and the underlying factor. In EFA, items with factor loadings of 0.3 or greater are considered to be related to the factor. In reviewing Tables 1 and 2 below, the coloured cells indicate that items of the same colour meet this threshold (with certain exceptions as noted) forming a factor – for example, in Table 1, the two green highlighted items load highly (>0.64 each) on Factor 3, Sexual Abuse, and therefore these two items form the Sexual Abuse Sub-scale for the CASr-SF. We also present the overall amount of variance accounted for in each factor analysis. For example, in Table 1 we note that this solution accounts for 40.1% of the variance; this means that the three factors can explain 40% of the relationships between the items.

FINDINGS

- We found a reasonable 3 factor solution that corresponds very well with previous work on the CASr-SF. This means that CASr-SF items accurately represent three main domains of IPV experience: psychological/emotional; physical; sexual; both for men and women experiencing IPV, and for the overall sample.
- One item ('restricted access to job/money/finances') loaded slightly below the cut-off of 0.3 for both genders and overall. However, all three factor loadings (i.e., the relationships between each item and the factor) were greater than 0.2 in the psychological factor. Given that this is the same factor in which we found this item in our previous analyses of the CASr-SF, and that there are theoretical reasons to keep it (financial abuse is an important and distinct type of abuse), we retained the item going forward.
- Another item ('followed you/hung around outside home/work') did not reach the .30 threshold for men, however it was .295 in the psychological abuse factor (where it also loaded for women, and overall). This item was also important to retain, theoretically, and to ensure we go forward with one version of the CASr-SF that works across genders.
- The "test" item on sexual humiliation, added specifically to reflect the experiences of men, loads well in the psychological abuse factor for both men and women, and overall. It was also retained.
- In summary, these results align with our overall goal of having one instrument that works across genders to identify common and important forms of IPV, i.e., physical, sexual and psychological abuse.

Table 1: Factor Loadings, Full Sample *

Item	Psychological (F1)	Physical (F2)	Sexual (F3)
Told resp. were crazy/stupid/not good enough	0.712	-0.016	-0.060
Tried to convince family/friends resp. is crazy	0.632	-0.010	-0.043
Followed respondent/hung around outside home/work	0.364	0.182	0.097
Kept resp. from seeing family/friends	0.440	0.050	0.085
Harassed (phone, text, email, social media)	0.675	-0.046	0.056
Made respondent perform unwanted sex	0.061	0.010	0.642
Shook, pushed, grabbed, threw respondent	0.245	0.618	-0.130
Restricted access to job/money/finances	0.215	0.190	0.070
Hit with fist/object, kicked/bit respondent	0.136	0.702	-0.144
Confined/locked in room	-0.059	0.520	0.117
Forced/tried to force to have sex	0.073	0.040	0.644
Threatened to harm/kill resp or someone close	0.134	0.466	0.018
Choked respondent	-0.071	0.664	0.067
Used/threatened knife/gun/weapon to harm	-0.081	0.664	0.037
Made comments re: sexual past/performance	0.556	-0.007	0.180
Blamed resp. for abusive/violent behaviour	0.696	0.061	0.004

Accounts for 40.1% of the variance [items of the same colour meet the minimum threshold of 0.30 and therefore form a factor: yellow = psychological, purple = physical, green = sexual abuse]
* With exclusions for small cell sizes, e.g., non male/female

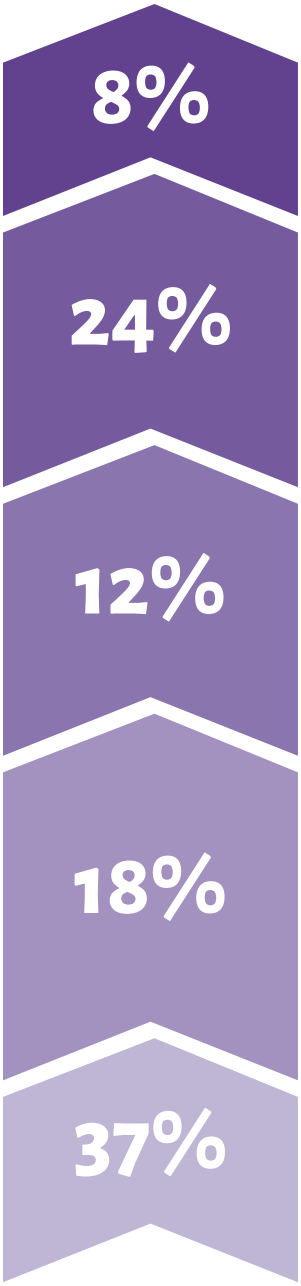
Table 2: Factor Loadings, Men and Women

Item	MEN[1]			WOMEN[2]		
	Physical (F1)	Psychological (F2)	Sexual (F3)	Psychological (F1)	Physical (F2)	Sexual (F3)
Told resp. were crazy/stupid/not good enough	-0.031	0.613	0.049	0.737	0.016	-0.072
Tried to convince family/friends resp. is crazy	0.022	0.610	-0.085	0.657	-0.026	-0.023
Followed respondent/hung around outside home/work	0.295	0.108	0.250	0.409	0.181	0.010
Kept resp. from seeing family/friends	0.107	0.309	0.080	0.512	0.031	0.131
Harassed (phone, text, email, social media)	0.181	0.366	0.261	0.732	-0.086	0.053
Made respondent perform unwanted sex	-0.011	0.075	0.451	0.084	0.014	0.652
Shook, pushed, grabbed, threw respondent	0.651	0.084	-0.002	0.310	0.616	0.165
Restricted access to job/money/finances	0.220	0.277	-0.173	0.229	0.156	0.115
Hit with fist/object, kicked/bit respondent	0.632	0.095	0.014	0.139	0.777	0.152
Confined/locked in room	0.362	-0.105	0.137	-0.075	0.643	0.099
Forced/tried to force to have sex	0.014	0.057	0.484	0.091	0.064	0.649
Threatened to harm/kill resp or someone close	0.405	0.121	-0.014	0.137	0.490	0.044
Choked respondent	0.509	0.061	-0.095	-0.074	0.714	0.056
Used/threatened knife/gun/weapon to harm	0.565	0.023	0.116	-0.089	0.677	0.100
Made comments re: sexual past/performance	-0.068	0.499	0.231	0.578	0.042	0.162
Blamed resp. for abusive/violent behaviour	0.153	0.550	0.051	0.743	0.050	-0.004

[1]Accounts for 30.4% of the variance [items of the same colour meet the minimum threshold of 0.30 and therefore form a factor: yellow = physical, purple = psychological, green = sexual abuse]
[2]Accounts for 45.7% of the variance [items of the same colour meet the minimum threshold of 0.30 and therefore form a factor: yellow = psychological, purple = physical, green = sexual abuse] form a factor: yellow = psychological, purple = physical, green = sexual abuse]

Objective 2: Determine the Patterns of IPV Identified by the CASr-SF

Identify different patterns of IPV experiences captured by the item pool using latent class analysis techniques



pattern 5
intense on all types of abuse

pattern 4
higher intensity psychological abuse and coercive control including stalking, harassment, higher levels of insults and isolation

pattern 3
psychological and physical abuse, including hitting, throwing, shaking, grabbing, insults, put downs and harassment

pattern 2
a mixed pattern of psychological and sexual abuse where the most dominant items relate to forced sex, sexual humiliation, sexual and other insults, harassment and isolation

pattern 1
lower intensity psychological abuse, characterized mainly by insults

FIGURE 1: LCA CLASSES/PATTERNS

METHODS

Latent Class Analysis (LCA) was used to identify groups of people with similar patterns of IPV, focused on past 12-month experiences, using a binary score for each item (experienced the form of IPV: yes or no). The decision regarding number of classes was based on theoretical interpretability of the classes and accepted statistical thresholds.

FINDINGS

Table 3 (next page) presents the mean and standard error of the frequency score for each of the 16 CASr-SF items among the people who fall into each of 5 classes. This 5-class solution best fits the data and was theoretically interpretable. Responses to the CASr-SF frequency items are scored on a 6-point scale based on how often each was experienced (Not in the last 12 months=0, Once in the past 12 months=1, A few times in the past 12 months=2, Monthly=3, Weekly=4, Daily=5). The standard error (SE) around each mean score is also presented to show the amount of variability.

The LCA identified 5 distinct classes, or patterns, that become increasingly severe (see Figure 1).

Table 3: Latent Classes (5 class solution) and Percentage of Respondents in Each Class*

Item	Class 1 (37%)	Class 2 (18%)	Class 3 (12%)	Class 4 (24%)	Class 5 (8%)
Told respondent they were crazy/ stupid/not good enough	**1.94 (0.04)**	**0.39 (0.06)**	**1.43 (0.12)**	**1.09 (0.08)**	**2.94 (0.16)**
Tried to convince family/friends respondent is crazy	0.09 (0.02)	0.03 (0.01)	**0.21 (0.07)**	**0.71 (0.07)**	**1.69 (0.21)**
Followed/hung around outside respondent home/work	<0.004	0.07 (0.04)	<0.004	0.28 (0.04)	**0.96 (0.14)**
Kept respondent from seeing family/friends	<0.004	**0.66 (0.11)**	0.09 (0.03)	**0.37 (0.06)**	**1.32 (0.19)**
Harassed (phone, text, email, social media)	<0.004	**0.28 (0.07)**	**0.20 (0.05)**	**1.56 (0.08)**	**2.50 (0.20)**
Made respondent perform unwanted sex	<0.004	**0.29 (0.05)**	<0.004	<0.004	**0.66 (0.14)**
Shook, pushed, grabbed, threw respondent	<0.004	0.04 (0.02)	**1.06 (0.09)**	0.01 (0.01)	**1.30 (0.12)**
Restricted access to job/money/ finances	0.04 (0.02)	**0.14 (0.03)**	<0.004	0.15 (0.04)	**0.43 (0.01)**
Hit with fist/object, kicked/bit respondent	<0.004	0.01 (0.00)	**0.87 (0.09)**	<0.004	**1.02 (0.17)**
Confined/locked in room	<0.004	0.01 (0.01)	0.03 (0.02)	<0.004	**0.23 (0.07)**
Forced/tried to force to have sex	<0.004	**0.40 (0.07)**	<0.004	<0.004	**0.79 (0.15)**
Threatened to harm/kill respondent or someone close	<0.004	<0.004	0.06 (0.03)	0.04 (0.01)	**0.74 (0.10)**
Choked respondent	<0.004	0.06 (0.03)	**0.14 (0.05)**	<0.004	**0.39 (0.10)**
Used/threatened knife/gun/ weapon to harm	<0.004	<0.004	0.07 (0.03)	<0.004	**0.24 (0.07)**
Made comments re: sexual past/ performance	**0.18 (0.03)**	**0.87 (0.07)**	**0.28 (0.07)**	**0.53 (0.07)**	**2.04 (0.24)**
Blamed respondent for abusive/ violent behaviour	**0.20 (0.03)**	**0.11 (0.03)**	**0.89 (0.11)**	**1.01 (0.10)**	**2.36 (0.24)**

* according to mean CASr-SF score (range 0-6), SE = standard error around the mean score; bolded data indicate items included in defining and naming the class (items can appear in multiple classes).

Table 4 compares the five classes on age, gender and mental health indicators. The following are highlighted:

- These patterns are highly gendered, with classes 1, 2 and 4 having more women than men, and class 3 having more men (61%) than women (39%). The most severe pattern (class 5) contained twice as many women as men (66% vs 34%).
- Age was also an important factor, with those who experienced low levels of psychological abuse (class 1) being older, while those experiencing sexual abuse (class 2) and the most severe forms of abuse (class 5) were younger.
- Moving across the abuse classes (from class 1 to class 5), we observe increasing rates of mental health concerns (with some minor exceptions) as well as increasing scores on the CASr-SF (class 1 lowest at 2.45 and class 5 highest at almost 10 times that, 19.6).

Table 4: Class Membership by Key Sample Characteristics

Item	Class 1: Low Level Psychological	Class 2: Psychological and Sexual	Class 3: Psychological and Physical	Class 4: Higher Intensity Psychological	Class 5: Intense on All Forms
Age in years (SD)	43 (1.18)	36 (1.30)	38 (1.34)	40 (0.90)	36 (1.69)
Male	43%	40%	61%	45%	34%
Female	57%	60%	39%	55%	66%
CASr-SF Total Score (range 0-80)	2.45 (0.07)	3.35 (0.24)	5.34 (0.27)	5.75 (0.27)	19.6 (1.25)
Mental Health Limitation (range 1-5 (SD))*	1.63 (0.05)	1.86 (0.11)	1.76 (0.08)	1.73 (0.06)	2.29 (0.13)
PTSD (yes)	6%	9%	6%	8%	21%
Anxiety (yes)	20%	24%	20%	22%	41%
Mood Disorder (yes)	18%	22%	17%	18%	36%
Depression (yes)	13%	15%	11%	16%	25%
Suicidal thoughts (yes)	23%	36%	32%	31%	54%

*Higher scores indicate greater mental health limitations.

Objective 3: Scoring the CASr-SF

Develop an approach to scoring the CASr-SF to best identify and classify those experiencing abuse and violence, while excluding those experiencing lower-level aggression not meeting the threshold of intimate partner violence, as empirically determined.

The CASr-SF was developed as a measure of IPV severity in the previous 12 months based on continuous scores. Where relevant, these scores can be used to classify cases by IPV exposure. The scoring approaches for IPV severity and Classification of IPV Exposure are described below. Appendix 2 provides these details, along with suggested syntax for use in the SPSS statistical software package.

DEVELOPMENT OF THE SCORING ALGORITHM

Based on the latent class analysis (LCA), we examined, theoretically and empirically, how different scoring thresholds on the three subscales (physical, psychological, sexual) identified through factor analysis affected where individuals fell in terms of the LCA pattern. A key goal was to differentiate those who were experiencing patterns of IPV that included ongoing acts of abuse of multiple kinds, and/or severe acts of violence, from those experiencing no or low levels of aggressive behaviours in the context of poor relationship interactions. Theoretically, this aligns with our emerging understanding of what Michael Johnson calls "intimate terrorism" (and the related "violent resistance"), versus "situational conflict," which is often bi-directional and less severe and harmful in nature.

For comprehensiveness, we include below an approach to computing severity of IPV (total and by sub-scale) developed using data from a concurrent analysis in a survey sample of people in Canada self-identifying as experiencing IPV and completing the CASr-SF.

COMPUTING IPV SEVERITY SCORES

Total severity of IPV scores can be computed using responses to questions that ask about the frequency of each item occurring in the past 12 months (ranging from 'not at all in the past 12 months' to 'daily/almost daily). The possible range of scores is 0-80.

Separate scores for severity of physical abuse, sexual abuse, and psychological abuse can also be computed using items that correspond to those subscales (see Table 5). Appendix 2 provides syntax, naming conventions and value labels for generating severity scores.

TABLE 5: CASr-SF SUBSCALES CHARACTERISTICS

Subscale	Number of Items	Items	Possible Range	IPV Positive Threshold
Physical Abuse	6	1, 3, 6, 7, 11, 13	0 - 30	> 1
Sexual Abuse	2	4, 8	0 - 10	> 0
Psychological Abuse	8	2, 5, 9, 10, 12, 14, 15, 16	0 - 40	> 4

Computing Total Severity of IPV Scores:

These scores reflect the mean of all 16 items for cases where there are responses to at least 70% of items. The syntax uses the case-specific mean of the remaining items to impute the value of missing responses. The possible range of scores is 0 to 80.

If a case does not contain responses to at least 70% of items, it should be counted as missing (no score computed).

Computing 3 Subscale Scores:

Use the same approach as above to compute separate scores for severity of Physical, Sexual and Psychological IPV using items assigned to each subscale.

For the physical and psychological abuse subscales: the syntax uses case-specific mean substitution in the same way as for total scores (in cases where at least 70% of items have responses). When less than 70% of items in the subscale have responses, no score is can be computed (the variable is marked as missing).

For the Sexual Abuse Subscale: Since this subscale includes only 2 items, a score can be computed only for cases with responses for both items. When responses are missing for either or both items, the variables should be counted as missing.

CLASSIFICATION OF IPV EXPOSURE

Using the approach derived from the LCA (see Objective 2, above), there are three classifications of IPV exposure:

- IPV Positive (meets threshold criteria, as below)
- Subthreshold IPV (a non-zero score that does not meet threshold criteria)
- No IPV (true zeros – an important category especially for general population samples)

Note: psychological abuse items were not included in the step 2 "check" because psychological abuse tends to occur in patterns of coercive control; on its own, a single item could easily reflect situational couple violence and not necessarily IPV. Many of the psychological abuse items could be endorsed at a low level on their own (e.g., insulted, tried to keep from family/friends, followed me – ONCE in past 12 months) and would not necessarily be an indicator of IPV. Sexual abuse items are de facto included since the threshold for this sub-scale in step 1 is any score > 0.

To ensure that those experiencing the most severe act of physical violence, even once, are not excluded from the IPV Positive group, we include an additional step to ensure that any experience of "choking" (i.e., strangulation) in the past 12 months meets the threshold for IPV.

Scoring Approach for IPV Exposure Classification:

Step 1: Use the cut scores in Table 5 to create three new threshold variables from existing subscale scores.

Step 2: Classify cases as IPV Positive if they meet one or more of these 3 thresholds.

Step 3: Convert non-IPV positive cases to IPV positive where there is a non-zero score on the item: "Choked me", regardless of whether initial thresholds have been met.

Step 4: Classify remaining scores into two groups based on their scores: no IPV (true zeros) or subthreshold IPV (non-zero but does not meet threshold scoring criteria).

Appendix 2 provides syntax for generating these classifications in SPSS statistical software. Findings using this scoring approach to assess overall prevalence of IPV in the SSPPS sample, and by specific groups, are presented under Objective 4.

Objective 4: Experiences of IPV Overall and by Specific Groups

Describe IPV in the overall sample, and by specific sub-groups, including past year IPV prevalence, overall and by gender, IPV severity and impacts overall and by gender and for specific sub-groups (pending data availability).

Conduct additional analyses to assess the relationship between IPV prevalence and other factors: relationship(s) between IPV and non-IPV violence; IPV and health-related impacts.

METHOD

We used weighted frequencies and t-tests/analysis of variance to determine if there are differences in IPV severity and prevalence in terms of gender (man versus woman only), and other key characteristics (Appendix 1, Supplementary Table 1). Since the SSPPS is a population sample, a classification of IPV Positive on the CASr-SF, based on the scoring algorithm described under Objective 3, above, was used to determine prevalence.

FINDINGS OVERVIEW

- Part 1 (Tables 6a-c) describes the included sample according to specific characteristics and presents the mean scores on the CASr-SF (i.e., IPV severity) according to these traits, indicators or related experiences.
- Part 2 (Table 7) provides overall prevalence and uses the new scoring algorithm to describe the sub-groups based on the 3 IPV thresholds (No IPV; Sub-Threshold IPV, IPV Positive).

PART 1: SAMPLE DESCRIPTION AND IPV SEVERITY BY SUB-GROUPS

Table 6a describes the sample overall, and notes differences in severity of IPV in the previous 12 months. Column 4 presents the mean CASr-SF scores for each characteristic, and the related standard deviation (SD). The mean score can range from 0 (experienced none of the items in past 12 months), to 80 (experienced each of the 16 items daily or almost daily in the past 12 months). Since these are whole-sample scores, with the majority of participants not experiencing any IPV, we expect the mean scores to be low. The standard deviation indicates the amount of variability around each of these means.

Specifically, more severe violence was reported by:

- People identifying as women compared to men [there were too few cases of people who identified as neither man nor woman to include in statistical analyses or allow release by Statistics Canada].
- Those identifying as Aboriginal/Indigenous compared to those not identifying as Indigenous.
- People born in Canada versus those identifying as landed immigrants.
- People who did not identify as members of a visible minority compared to those who did identify as such.
- Those reporting economic hardship in the previous year compared to those with no economic hardship.
- Those who reported employment (of any kind) in the previous year compared to those not employed.

Table 6a: Sample Characteristics According to IPV Severity*

Characteristic	% in sample	IPV Severity: mean CASr-SF score (SD)	Population Freq. (weighted)	Effect Size Cohen's d[3]
Gender[1]				
Man	50.7	0.36 (1.92)	10,973,000	0.08
Woman	49.3	0.54 (2.67)	10,655,000	
Aboriginal Status				
Yes	4.0	0.92 (3.65)	660,000	0.18
No	96.0	0.47 (2.42)	15,652,000	
Visible Minority Status				
Yes	18.7	0.40 (1.88)	4,016,000	0.02
No	81.3	0.45 (2.36)	17,410,000	
Landed Immigrant Status				
Yes	90.4	0.32 (1.72)	4,978,000	0.25
No	9.6	0.79 (3.11)	529,000	
Economic Difficulties				
Easy/Very easy	73.3	0.36 (2.00)	15711000	0.15
Difficult/Very difficult	26.7	0.70 (3.04)	5714000	
Employed (any, past year)				
Yes	20.6	0.62 (3.14)	1,425,000	0.18
No	79.4	0.24 (1.72)	5,486,000	
Marital Status				
Married	65.9	0.22 (1.31)	14227000	NA[4]
Common-law	16.9	0.43 (2.13)	3655000	
Separated	12.0	1.42 (4.66)	2584000	
Divorced	2.0	1.47 (4.18)	428000	
Single[2]	3.2	0.91 (3.29)	700000	

* CASr-SF mean total score; weighted, full sample, 19+ years old

[1] Those who did not identify as man or woman were too few in number to include in statistical analyses.

[2] 'Single' category includes 'never married' and 'widowed'.

[3] All differences are statistically significant.

[4] Cannot compute effect size because there are more than two groups.

SD = standard deviation

In terms of marital status, those identifying as separated or divorced reported the most severe IPV followed by those who were single (including never married and widowed). Those who were in a common-law relationship or married reported the least severe IPV.

While all comparisons are statistically significant, examination of the effect sizes in the right-hand column indicates that the findings regarding Aboriginal/Indigenous status, immigrant status, and employment are of importance.

Table 6b describes the sample overall, and notes differences in severity of IPV (mean scores) in the previous 12 months by self-reported experiences of previous non-IPV violence. Specifically:

- Rates of non-IPV physical and sexual assault in the sample, including before age 15, were high –21% for sexual assault, 32% for physical assault and 28% for assault before age 15. Experiencing/ witnessing violence between parents one or more times was reported by 12% of the sample.
- For each type of non-IPV violence, severity of IPV was greater among those who reported these experiences than for those who did not report these experiences. The effect sizes indicate that all were in the low-moderate range, meaning that these are important differences.

Table 6c describes differences in severity of IPV according to self-reported health status indicators in the overall sample. It should be noted that indicators are not being attributed directly to IPV (as in SSPPS, these questions are asked separately; this analysis examines association only). Specifically:

- Significant proportions of the sample reported various health concerns, ranging from 3.6% for post-traumatic stress disorder (PTSD) to 22.7% for back problems. For all categories but arthritis, those reporting a health concern also reported more severe IPV. This was especially true for PTSD, anxiety and mood disorders, which reached the threshold of important effect sizes.

Table 6b: Previous Experiences of Non-IPV Violence According to IPV Severity*

Non-IPV Violence	% in sample	IPV Severity: mean CASr-SF score (SD)	Population Freq. (weighted)	Effect Size Cohen's d[1]
Experience Physical Assault (excluding IPV)				
Yes	31.6	0.84 (3.28)	6,767,000	0.25
No	68.4	0.27 (1.66)	14669000	
Experience Sexual Assault (excluding IPV)				
Yes	20.8	1.01 (3.75)	4439000	0.30
No	79.2	0.31 (1.76)	16880000	
Experience Assault Before Age 15				
Never	71.6	0.30 (1.83)	15284000	0.22
Yes	28.4	0.82 (3.22)	6067000	
Witnessed Violence Between Parents				
Never	87.9	0.37 (2.01)	18934000	0.29
1+ times	12.1	1.04 (3.87)	2596000	

* CASr-SF mean total score; weighted, full sample, 19+ years old

[1] All differences are statistically significant.

Table 6c: Health Status According to IPV Severity*

Health Indicator	% in sample	IPV Severity: mean CASr-SF score (SD)	Population Freq. (weighted)	Effect Size Cohen's d[1]
Arthritis				
Yes	20.3	0.40 (2.43)	4371000	0.03
No	79.7	0.46 (2.29)	17213000	
Back problems				
Yes	22.7	0.55 (2.80)	4898000	0.06
No	77.3	0.42 (2.16)	16675000	
Mood disorders				
Yes	9.7	1.18 (4.01)	2098000	0.35
No	90.3	0.37 (2.02)	19467000	
Anxiety Disorder				
Yes	12.2	1.09 (3.95)	2632000	0.32
No	87.8	0.36 (1.98)	18929000	
Post-traumatic stress disorder				
Yes	3.6	1.78 (5.95)	772000	0.60
No	96.4	0.40 (2.05)	20788000	
Other chronic health condition				
Yes	16.1	0.64 (2.98)	3469000	0.10
No	83.9	0.41 (2.17)	18111000	

* CASr-SF mean total score; weighted, full sample, 19+ years old
[1] All differences are statistically significant.

PART 2: PREVALENCE BY SUB-GROUPS

Tables 7a-c show differences in the proportions of people meeting the IPV positive threshold, subthreshold IPV, or no IPV. The pattern of results is the same as the severity scoring results reported above.

Demographic Characteristics

- Those identifying as men were more likely to report no IPV in the past year, while women were more likely to report both sub-threshold IPV and be IPV positive (men=2.6%, women=3.5% were IPV positive).
- Those identifying as Aboriginal/Indigenous, compared to non-Aboriginal/Indigenous respondents, were more likely to experience subthreshold IPV or be IPV positive than be IPV negative, with the highest proportion of responses occurring in the IPV Positive category (i.e., 6.9% of Aboriginal/Indigenous and 3.1% of those not Aboriginal/Indigenous scored positive for IPV).
- Those identifying as a visible minority were less likely to be classified as subthreshold IPV or IPV positive than IPV negative; 2.7% of visible minorities and 3.1% of non-visible minorities were positive for IPV. This pattern is different for immigration status, with fewer (2.2%) landed immigrants scoring IPV positive than those born in Canada (5.9%).
- Those who reported economic difficulty meeting their needs were more likely to be IPV positive than those without economic difficulties (4.6% vs. 2.4%).

- Those who were employed in the past 12 months were more likely to be classified in the sub-threshold IPV or the IPV positive group than to be IPV negative; 3.9% of those employed versus 1.5% of unemployed participants were IPV positive.
- IPV varied according to marital status. Separated (10.0%) and divorced (11.0%) people had the greatest likelihood of being IPV positive, followed by single people (6.4%) and the lowest rate was among married people (1.4%).

Table 7a: Sub-Group Demographics According to IPV Status*

Characteristic	No IPV (%) [Total sample prevalence = 91.6%]	Subthreshold (%) [Total sample prevalence = 5.4%]	IPV positive (%) [Total sample prevalence = 3.0%]
Gender			
Man	92.72%	4.72%	2.56%
Woman	90.47%	6.08%	3.45%
Aboriginal Status			
Yes	86.57%	6.57%	6.87%
No	91.08%	5.83%	3.09%
Visible Minority Status			
Yes	92.40%	4.94%	2.66%
No	91.44%	5.48%	3.07%
Landed Immigrant Status			
Yes	93.69%	4.14%	2.17%
No	88.28%	5.86%	5.86%
Economic Difficulties			
No	92.54%	5.02%	2.44%
Yes	88.95%	6.48%	4.57%
Employed (any, past year)			
Yes	89.69%	6.39%	3.92%
No	95.04%	3.49%	1.47%
Marital Status			
Married	94.47%	4.07%	1.46%
Common-law	90.93%	6.51%	2.56%
Separated	79.68%	10.31%	10.01%
Divorced	78.75%	10.29%	10.96%
Single	88.09%	5.54%	6.37%

* CASr-SF scoring threshold, full sample, 19+ years old

Table 7B: Non-IPV Violence Experiences (Lifetime) According to IPV Status*

Violence Experience	No IPV (%) [Total sample prevalence = 91.6%]	Subthreshold (%) [Total sample prevalence = 5.4%]	IPV positive (%) [Total sample prevalence = 3.0%]
Physical assault since 15			
Yes	85.74%	8.64%	5.62%
No	94.25%	3.96%	1.80%
Sexual assault since 15			
Yes	83.70%	9.80%	6.50%
No	93.60%	4.26%	2.15%
Assault before 15			
Yes	86.25%	8.33%	5.43%
No	93.67%	4.27%	2.06%
Witness violence between parents			
Yes	84.58%	8.48%	6.95%
No	92.53%	4.99%	2.48%

* CASr-SF scoring threshold, full sample, 19+ years old

Non-IPV Violence

- Those who experienced non-IPV violence were more likely to be classified as sub-threshold IPV or IPV positive than IPV negative for all four types of non-IPV violence experiences; IPV positive rates ranged from 5.4% to 7.0%.

Health Status

- IPV is more likely among those with mental health conditions; 10.3% of those PTSD, 7.6% of those with mood disorder, and 6.8% of those with anxiety were IPV positive.
- IPV was slightly more common among those with back problems (3.5% vs. 2.9%) and with other chronic health concerns (4.1% vs. 2.8%) compared to those without these health conditions.

Table 7C: Health Indicators According to IPV Status*

Health Indicator	No IPV (%) [Total sample prevalence = 91.6%]	Subthreshold (%) [Total sample prevalence = 5.4%]	IPV positive (%) [Total sample prevalence = 3.0%]
Arthritis			
Yes	93.21%	4.32%	2.48%
No	91.20%	5.66%	3.14%
Back problems			
Yes	91.17%	5.36%	3.47%
No	91.72%	5.40%	2.87%
Mood disorder			
Yes	82.67%	9.76%	7.57%
No	92.57%	4.92%	2.52%
Anxiety			
Yes	84.03%	9.18%	6.79%
No	92.67%	4.85%	2.48%
PTSD			
No	80.28%	9.42%	10.30%
Yes	92.03%	5.23%	2.74%
Other chronic health condition			
Yes	88.89%	7.06%	4.05%
No	92.11%	5.08%	2.81%

* CASr-SF scoring threshold, full sample, 19+ years old

SUMMARY OF KEY FINDINGS

1. Overall, using our new scoring approach to estimate population prevalence, we found that 91.6% of this sample of Canadians 19 years and older reported no IPV in the past year, while 5.4% reported experiencing behaviours that did not meet the scoring threshold (i.e., Subthreshold IPV). Overall, 3% of the sample reported experiences that met the threshold for IPV ("IPV Positive").
2. Women, Indigenous Peoples, non-visible minority respondents, those born in Canada, those facing economic difficulties, and those reporting any past year employment were more likely than their group counterparts, and the overall sample, to be "Subthreshold IPV" or "IPV Positive".
3. All forms of non-IPV violence across the lifespan were strongly related to IPV experiences.
4. IPV experiences were strongly related to all forms of mental health concerns, with weaker effects on specific physical concerns (arthritis, back problems).

Objective 5: Comparison of CASr-SF and GSS-V Items

Of particular interest to government agencies conducting the SSPPS is whether the IPV items derived from the General Social Survey – Victimization (GSS-V) provide additional information about IPV experiences, beyond that provided by the CASr-SF items. This will inform future decisions about IPV items in the SSPPS.

METHOD

We examined the correlations and cross-tabulations ('cross-tabs') between the modified GSS-V items and the CASr-SF items. Two ways to present the correlation matrices are presented in Appendix 1:

- Presentation 1 (Supplementary Table 3a) examines how each of the 10 unique modified GSS-V items correlate with the 16 CASr-SF items.
- Presentation 2 (Supplementary Table 3b) examines how each of the 16 CASr-SF items correlate with the 10 unique modified GSS-V items.

Thus, the same correlations are presented, but from different perspectives.

As a further check, we then examined, using cross-tabs (Table 4), how the modified GSS-V items performed when using the new scoring approach described on pages 14 - 15. This led to three IPV classifications:

1. No IPV – true zero score (i.e., does not endorse any modified GSS-V IPV items in past year)
2. Sub-threshold IPV – endorses some modified GSS-V items but not meeting the scoring thresholds above
3. IPV Positive – meets the scoring thresholds above and/or is > 0 on the CASr-SF choking item

SUMMARY OF FINDINGS

- When examining the correlation of modified GSS-V items with each CASr-SF item (Supplemental Table 3a), all correlate with at least one CASr-SF item at 0.40 or higher, except for the question regarding pets, which has a correlation with the CASr-SF "blame" item of 0.24. However, the "pets" item does not apply to all respondents (not everyone has a pet), which was a key part of the rationale for excluding it from the CASr-SF. This rationale has not changed.
- The high correlations between the remaining modified GSS-V items and the CASr-SF items means that the modified GSS-V items (which use the CASr-SF response scale and not the original GSS-V scoring) are duplicative of the types of abusive behaviours captured by the CASr-SF.
- Further, Supplemental Table 3b shows that no GSS items are correlated greater than 0.40 with 6 of 16 CASr-SF items (items 3, 4, 6, 8, 11 and 13). Thus, the CASr-SF captures unique aspects of IPV in the areas of stalking, isolation from family and friends, sexual coercion and forced sex, financial abuse, and choking/strangulation.
- Examination of the cross-tabs of the modified GSS-V items using the new prevalence scoring approach, when compared to the prevalence derived from the CASr-SF, indicates that including the GSS-V items would not capture any additional IPV+ cases.
- We therefore recommend excluding the 10 modified GSS-V items from subsequent cycles of the SSPPS.

Conclusions & Recommendations

OVERVIEW

The findings outlined in this report represent a significant advance in the measurement of intimate partner violence in Canada, and our ability to interpret IPV experiences. The key findings are summarized below, followed by implications and recommendations for research, policy and practice. Given the large sample included in the SSPPS, these findings should be generalizable to the broader population of Canadians experiencing, and not experiencing, IPV.

This is the first use of the 16-item CASr-SF in a population-based Canadian survey, i.e., the SSPPS. Consistent with our previous findings in research samples of Canadian women (Ford-Gilboe et al., 2016) and women and men (Ford-Gilboe et al., forthcoming), we found that the CASr-SF identifies 3 sub-types of IPV: psychological, physical and sexual abuse. These sub-types, or factors, are the same for both men and women; analyses according to non-binary or other gender identities was not possible due to small sample sizes and Statistics Canada data release rules.

SCORING THE CASr-SF

Our scoring approach identifies those meeting a threshold of experiences consistent with empirical and theoretical understandings of IPV victimization, while excluding those experiencing lower levels of aggression, often termed "situational couple violence" (M. Johnson, 2011). This is an important addition to the literature as it will assist in identifying adults experiencing IPV, who require different policy and service responses, compared to those in poor relationships, who might require very different interventions.

PREVALENCE OF IPV IN CANADA, OVERALL AND BY SPECIFIC GROUPS

Using our scoring approach, we found that 91.6% of this sample of Canadians 19 years and older reported no IPV in the past year, 5.4% reported experiencing some abusive behaviours that did not meet the scoring threshold (i.e., Subthreshold IPV), and 3.0% of the sample reported experiences that met the threshold for IPV ("IPV Positive"). Further, sub-group analyses reinforce what we know about who experiences IPV in Canada. It is important to understand that while we report on experiences between certain groups, IPV is a problem with root causes based in our beliefs and norms around gender (Savage & Cotter, 2019) and these intersect with social and structural conditions, including access to social determinants of health, that place some groups, especially women and gender non-binary people, at greater risk of violence than others. Thus, these data should not be used to reinforce stereotypes about specific groups, but to illuminate the social norms and policy actions that require change to better support those placed at greatest risk.

We found that those self-identifying as women, Indigenous People, non-visible minority respondents, those born in Canada, those facing economic difficulties in the past year, and those reporting any employment in the past year were more likely than men, non-Indigenous People, visible minority respondents, those not born in Canada, and those not reporting economic difficulties or past-year employment (respectively), and the overall sample, to be in the "Subthreshold IPV" and "IPV Positive" categories, versus the "No IPV" category.

Further, all forms of non-IPV violence experiences across the lifespan (i.e., childhood assault and exposure to violence in the home, and non-partner sexual and physical assault since age 15) were strongly related to IPV experiences.

Finally, all forms of mental health concerns were strongly related to IPV experiences, with weaker relationships between specific physical concerns (arthritis, back problems) and IPV experiences.

PATTERNS OF IPV OVERALL AND BY GENDER AND AGE

Using latent class analysis (LCA), which groups people in the sample according to their responses to CASr-SF items, we identified five (5) distinct patterns of IPV, with increasing levels of severity:

Pattern/Class 1: lower intensity psychological abuse, characterized mainly by insults; 37% of those experiencing IPV were in this class, i.e., predominantly experienced this pattern of abuse.

Pattern/Class 2: a mixed pattern of psychological and sexual abuse where the most dominant items relate to forced sex, sexual humiliation, sexual and other insults, harassment and isolation (18%).

Pattern/Class 3: psychological and physical abuse, including hitting, throwing, shaking, grabbing, insults, put downs and harassment (12%).

Pattern/Class 4: higher intensity psychological abuse and coercive control including stalking, harassment, higher levels of insults and isolation (24%).

Pattern/Class 5: intense on all types of abuse (8%).

These patterns are highly gendered, with more women than men in classes 1, 2 and 4 and more men in class 3. The most severe pattern (class 5) contained twice as many women as men. Age was also an important factor; those who experienced low levels of psychological abuse (class 1) were older, while those experiencing sexual abuse (class 2) and the most severe forms of abuse (class 5) were younger. Moving across the abuse classes (from class 1 to class 5), we observed increasing rates of mental health concerns (with some minor exceptions) as well as increasing scores on the CASr-SF.

This means that men and women, while both experiencing IPV, have different patterns of abuse, with women experiencing the more severe forms, which are related to more mental health concerns. Men are more likely to experience low level physical (e.g., shaking, throwing things) and psychological (e.g., put downs) abuse. Severe abuse and sexual abuse were more likely to be experienced by younger respondents. These findings help us understand who experiences what kind of violence, and how best to direct services and policies according to patterns of abuse.

CASr-SF AS A COMPLETE MEASURE OF IPV EXPERIENCES

Given that the SSPPS was a new survey, and the CASr-SF a new instrument for population surveys, both it and core IPV-specific items from the General Social Survey – Victimization (GSS-V), Statistics Canada's recurrent survey on IPV in Canada, were included. A key research question was whether both sets of questions are required, going forward. It should be noted that the GSS-V questions asked in the SSPPS were not identical to those from previous GSS cycles, as the response scale was modified by Statistics Canada to match that used by the CASr-SF (scaled by frequency (how often), rather than binary (yes/no)), as were the timeframes queried (i.e., lifetime and past-year in the SSPPS versus past 5 years in the GSS). Our analysis comparing CASr-SF items to these modified GSS-V items indicates that the CASr-SF captures all relevant information about abusive experiences (i.e., the two sets of items are highly inter-correlated). Thus, the GSS-V items do not add any additional information about IPV experiences in large population-based surveys when the CASr-SF is used. Further, the CASr-SF captures unique aspects of IPV in the areas of stalking, isolation from family and friends, sexual coercion and forced sex, financial abuse, and choking/strangulation.

LIMITATIONS

Statistics Canada's data use and release requirements for data being analyzed in the Research Data Centres (RDC) placed a number of limitations on what we were able to analyze and report. For example, RDC will only release weighted sample data, meaning that actual sample and sub-sample sizes are not provided. Similarly, tables with cell values of under 5 cases are

not released to ensure confidentiality (including no self-identification) of participants, meaning that items we expect to be low frequency, such as choking/strangulation, often preclude the ability of a table to be released. Where possible we employed strategies to mask data such that identification of individuals would not be possible; however some data, or outputs consistent with standard statistical reporting, were not available. Also unavailable were data for gender non-binary people – there were too few who identified as neither man nor woman to allow analysis by CASr-SF severity or pattern of IPV.

Similarly, the way that some items were asked, especially in terms of skip patterns (i.e., a question is only asked if the response to a previous, related question or questions, had a specific response) also led to very small cell sizes for some respondent characteristics and outcome measures, such that attempting to analyze, for example, specific IPV items by disability status was not possible. Finally, the constructed variable for geographic location/metropolitan census area generally created by Statistics Canada to determine urban/rural/remote status was not available in the data set, meaning we were unable to assess IPV experiences according to geographic location. These gaps are priorities for future analyses.

Conclusions & Recommendations

For measuring and reporting on IPV experiences

The 16-item CASr-SF is a robust measure of IPV experiences among Canadian adults that differentiates patterns of abuse experiences and distinguishes IPV from lower-level aggression or conflict. It is capable of capturing variation in IPV across important dimensions, including gender, age, financial strain and other aspects of identity, and related health concerns.

We therefore recommend that future cycles of the SSPPS do not include the GSS-V items. Furthermore, we encourage the addition of questions asking about the gender of the partner(s) responsible for, especially, past-year IPV, as we know from other research that perpetrator gender is an important consideration, especially when assessing IPV severity and patterns of abuse. We strongly recommend strategies to over-sample for inclusion of gender identities that are not "man" or "woman". Finally, we recommend a review of how certain questions are asked (e.g., skip patterns) to ensure the ability to analyze IPV (and other violence) experiences more completely.

For policy and program development

Policy and program development must consider differential experiences and consequences of IPV among different groups, taking an intersectional approach. We recommend that the scoring approach outlined in this report to classify respondents according to their level of IPV severity be used to develop policies and services tailored to people's violence experiences, as well as their individual needs and contexts. This means, especially, recognizing that people classified as "IPV Positive" are generally experiencing ongoing physical, sexual and/or emotional violence with commensurate health and social impacts, including on income and work. Interventions designed for these people must be trauma- and violence-informed, survivor-centric and prioritize safety and survivor agency. Interventions for those in the "Sub-threshold IPV" category might be quite different, with a focus on healthy relationship behaviours.

References

Ford-Gilboe, M., Wathen, C.N., Varcoe, C., MacMillan, H., Scott-Storey, K., Mantler, T., & Hegarty, K., & Perrin, N. (2016). Development of a brief measure of intimate partner violence experiences: The Composite Abuse Scale (Revised) – Short Form (CASR-SF). *BMJ Open 6*(12), e012824.

Ford-Gilboe, M., Wathen, C.N., Perrin, N., O'Donnell, S., Scott-Storey, K., Varcoe, C. (forthcoming). Validation of the Composite Abuse Scale (revised) – Short Form (CASr-SF) in Adults Experiencing Intimate Partner Violence. Manuscript in preparation.

Hegarty, K., Bush, R., & Sheehan, M. (2005). The composite abuse scale: further development and assessment of reliability and validity of a multidimensional partner abuse measure in clinical settings. *Violence and Victims*, 20(5), 529-47.

Hegarty K, Sheehan M, Schonfeld C. (1999). A multidimensional definition of partner abuse: development and preliminary validation of the Composite Abuse Scale. *Journal of Family Violence*, *14*, 399-415.

Johnson, H. (2015). Degendering Violence. *Social Politics: International Studies in Gender, State & Society*, *22*(3), 390–410. https://doi.org/10.1093/sp/jxv021

Johnson, M.P. (2011). Gender and types of intimate partner violence: A response to an anti-feminist literature review. *Aggression and Violent Behavior*, *16*(4), 289-96.

Savage, L. & Cotter, A. (2019). Perceptions related to gender-based violence, gender equality, and gender expression. *Juristat Bulletin*. Statistics Canada. https://www150.statcan.gc.ca/n1/pub/85-005-x/2019001/article/00001-eng.htm

World Health Organization/London School of Hygiene and Tropical Medicine. (2010). *Preventing intimate partner and sexual violence against women: taking action and generating evidence*. Geneva: WHO.

Appendices

Appendix 1: Supplementary Tables

Supplementary Table 1: SSPPS (2018) Variables Used in Present Analysis

Variable Name	Brief Description
Sample Characteristics	
VISMIN	Visible minority status (y/n)
AEB_Q01	Aboriginal (Indigenous) status (y/n)
BPR-16	Landed immigrant status (y/n)
EWB_120	Economic well-being - Easy/difficult to meet needs - Past 12 months
LPY_01	Employed at any time - Past 12 months
MARSTAT	Marital status
IPV Questions	
IPV	Experiences in intimate partner relationships: ▪ 10 Qs uniquely from CASr-SF ▪ 10 Qs uniquely from GSS-V (CASr-SF response scale) ▪ 5 Qs that appear in both CASr-SF and GSS ▪ 1 New Q on humiliation that's also in CASr-SF ▪ 1 other new Q on "outing" that is not on CASr-SF
Non-IPV Violence	
CEXABU	Childhood experiences of physical or sexual assault, y/n, before age 15
CEX_080	Childhood - Witnessed violence between parents
PA_LT	Physical assault (non-IPV) since age 15
SA_LT	Sexual assault (non-IPV) since age 15
Health Status Indicators	
CCC_110	Long-term conditions - Arthritis
CCC_120	Long-term conditions - Back problems
CCC_130	Long-term conditions - Mood disorder
CCC_140	Long-term conditions - Anxiety disorder
CCC_150	Long-term conditions - Post-traumatic stress disorder
CCC_160	Long-term conditions - Other

Supplementary Table 2: Recoding of CASr-SF Items

Recoded to	Initial SSPPS code	Item
Ipv1	IPV_125	Told respondent they were crazy/stupid/not good enough
Ipv2	IPV_130	Tried to convince family/friends respondent is crazy
Ipv3	IPV_135	Followed respondent/hung around outside home/work
Ipv4	IPV_140	Kept respondent from seeing family/friends
Ipv5	IPV_145	Harassed (phone, text, email, social media)
Ipv6	IPV_150	Made respondent perform unwanted sex
Ipv7	IPV_155	Shook, pushed, grabbed, threw respondent
Ipv8	IPV_160	Restricted access to job/money/finances
Ipv9	IPV_165	Hit respondent with fist/object, kicked/bit respondent
Ipv10	IPV_170	Confined/locked respondent in room
Ipv11	IPV_175	Forced/tried to force respondent to have sex
Ipv12	IPV_180	Threatened to harm/kill respondent or someone close
Ipv13	IPV_185	Choked respondent
Ipv14	IPV_190	Used/threatened knife/gun/weapon to harm respondent
Ipv15	IPV_220	Made comments re: respondent's sexual past/performance
Ipv16	IPV_230	Blamed respondent for abusive/violent behaviour

Supplementary Table 3a: Presentation 1 of modified GSS-V item correlations with CASr-SF items

CASr-SF item	GSS ITEM									
	ipv235 (jealous)	ipv240 (pets)	ipv245 (where)	ipv250 (put down)	ipv255 (money)	ipv330 (threat hit)	ipv335 (damage)	ipv340 (thrown things)	ipv345 (slapped)	ipv350 (beaten)
ipv1 (told crazy)	0.4412	0.1895	0.4158	**0.7594**	0.2988	0.356	0.3704	0.3279	0.323	0.1785
ipv2 (conv crazy)	0.3086	0.2194	0.3114	0.4230	**0.4198**	0.3812	0.4070	0.3740	0.2988	0.1732
ipv3 (followed)	0.3328	0.1314	0.3578	0.2632	0.2803	0.2762	0.2831	0.3121	0.2556	0.1403
ipv4 (kept seeing)	0.3331	0.1658	0.3407	0.3171	0.3302	0.2255	0.2945	0.2728	0.2112	0.1925
ipv5 (harass)	**0.4695**	0.2136	**0.4919**	0.4505	0.3317	0.3320	0.3559	0.3130	0.2793	0.1336
ipv6 (sex acts)	0.2556	0.2713	0.2446	0.2296	0.3226	0.2074	0.1737	0.2493	0.1816	0.1690
ipv7 (shook, push)	0.3394	0.1937	0.3405	0.4133	0.3167	0.5674	0.3457	0.4828	0.5443	0.4048
ipv8 (financial)	0.1855	0.0938	0.1698	0.1997	0.1922	0.0990	0.2185	0.1673	0.0824	0.1108
ipv9 (hit fist)	0.3180	0.1392	0.3158	0.3130	0.3494	**0.6717**	0.3346	**0.5723**	**0.6373**	0.3983
ipv10 (confined)	0.1669	0.2260	0.1657	0.1430	0.2434	0.3077	0.2115	0.1823	0.2854	0.4141
ipv11 (force sex)	0.2272	0.2283	0.2196	0.2280	0.2323	0.1314	0.2168	0.1889	0.1254	0.1373
ipv12 (threat)	0.1957	0.2656	0.2071	0.2377	0.1526	0.4421	0.2447	0.2624	0.2929	0.3118
ipv13 (choked)	0.1709	0.1740	0.1450	0.1877	0.2932	0.3726	0.2792	0.3318	0.3549	0.3227
ipv14 (weapon)	0.1004	0.3113	0.1183	0.1117	0.2041	0.3575	0.2468	0.2487	0.2676	**0.4150**
ipv15 (sex past)	0.4434	0.1725	0.4341	0.4589	0.2797	0.3383	0.3643	0.3674	0.3003	0.1437
ipv 16 (blamed)	0.4044	**0.2480**	0.4280	0.5830	0.3991	0.4061	**0.4558**	0.3947	0.3273	0.2318

Note: Bold indicates highest correlation for set/column.

Supplementary Table 3b: Presentation 2 of CASr-SF item correlations with of modified GSS-V items

GSS item	CASr-SF ITEM ipv1 (told crazy)	ipv2 (conv crazy)	ipv3 (followed)	ipv4 (kept seeing)	ipv5 (harass)	ipv6 (sex acts)	ipv7 (shook)	ipv8 (financial)	ipv9 (hit fist)	ipv10 (confined)	ipv11 (force sex)	ipv12 (threat)	ipv13 (choked)	ipv14 (weapon)	ipv15 (sex past)	ipv16 (blamed)
ipv235 (jealous)	0.4412	0.3086	0.3328	0.3331	0.4695	0.2556	0.3394	0.1855	0.3180	0.1669	0.2272	0.1957	0.1709	0.1004	0.4434	0.4044
ipv240 (pets)	0.1895	0.2194	0.1314	0.1658	0.2136	**0.2713**	0.1937	0.0938	0.1392	0.2260	0.2283	0.2656	0.1740	0.3113	0.1725	0.2480
ipv245 (where)	0.4158	0.3114	**0.3578**	**0.3407**	**0.4919**	0.2446	0.3405	0.1698	0.3158	0.1657	0.2196	0.2071	0.1450	0.1183	0.4341	0.4280
ipv250 (put down)	**0.7594**	**0.4230**	0.2632	0.3171	0.4505	0.2296	0.4133	0.1997	0.3130	0.1430	0.2280	0.2377	0.1877	0.1117	**0.4589**	**0.5830**
ipv255 (money)	0.2988	0.4198	0.2803	0.3302	0.3317	0.3226	0.3167	0.1922	0.3494	0.2434	**0.2323**	0.1526	0.2932	0.2041	0.2797	0.3991
ipv330 (threat hit)	0.356	0.3812	0.2762	0.2255	0.3320	0.2074	**0.5674**	0.0990	**0.6717**	0.3077	0.1314	**0.4421**	**0.3726**	0.3575	0.3383	0.4061
ipv335 (damage)	0.3704	0.4070	0.2831	0.2945	0.3559	0.1737	0.3457	**0.2185**	0.3346	0.2115	0.2168	0.2447	0.2792	0.2468	0.3643	0.4558
ipv340 (thrown)	0.3279	0.3740	0.3121	0.2728	0.3130	0.2493	0.4828	0.1673	0.5723	0.1823	0.1889	0.2624	0.3318	0.2487	0.3674	0.3947
ipv345 (slapped)	0.323	0.2988	0.2556	0.2112	0.2793	0.1816	0.5443	0.0824	0.6373	**0.2854**	0.1254	0.2929	0.3549	0.2676	0.3003	0.3273
ipv350 (beaten)	0.1785	0.1732	0.1403	0.1925	0.1336	0.1690	0.4048	0.1108	0.3983	0.4141	0.1373	0.3118	0.3227	**0.4150**	0.1437	0.2318

Note: Bold indicates highest correlation for set.

Supplementary Table 4: Crosstabs of Modified GSS-V Questions by IPV Classification (weighted)

Modified GSS-V Item	Past year (y/n)	IPV Classification weighted n, %			Total
		No IPV	Sub-theshold IPV	IPV Positive	
ipv235 (jealous)	not in the past 12 months	19404000 (97.44)	843500 (70.12)	264500 (39.45)	20512000 (94.15)
	One or more in the past 12 months	509000 (2.56)	360000 (29.93)	406000 (60.55)	1275000 (5.85)
	Total	19913000 (100)	1203000 (100)	670500 (100)	21787000 (100)
ipv245 (demand to know where you are)	not in the past 12 months	19686500 (98.86)	1016500 (84.50)	337500 (50.34)	21040000 (96.57)
	One or more in the past 12 months	227000 (1.14)	187000 (15.54)	333500 (49.74)	747500 (3.43)
	Total	19913500 (100)	1203000 (100)	670500 (100)	21787000 (100)
ipv250 (put you down)	not in the past 12 months	19522000 (98.06)	571000 (47.48)	120000 (17.90)	20213000 (92.80)
	One or more in the past 12 months	386000 (1.94)	631500 (52.52)	550500 (82.10)	1568000 (7.20)
	Total	19907500 (100)	1202500 (100)	670500 (100)	21781000 (100)
ipv255 (forced you to give them money)	not in the past 12 months	19904500 (99.95)	1175000 (97.67)	571500 (85.23)	21651000 (99.37)
	One or more in the past 12 months	9500 (0.05)	28000 (2.33)	99000 (14.77)	136500 (0.63)
	Total	19914000 (100)	1203000 (100)	670500 (100)	21787500 (100)
ipv330 (threatened to hit or hurt you)	not in the past 12 months	19827000 (99.97)	1175000 (97.67)	489000 (73.09)	21490500 (99.01)
	One or more in the past 12 months	7000 (0.04)	28500 (2.37)	180000 (26.91)	215500 (0.99)
	Total	19833500 (100)	1203000 (100)	669000 (100)	21706000 (100)
ipv335 (damaged your things)	not in the past 12 months	19827000 (99.97)	1175000 (97.67)	489000 (73.09)	21490500 (99.01)
	One or more in the past 12 months	7000 (0.04)	28500 (2.370)	180000 (26.91)	215500 (0.99)
	Total	19833500 (100)	1203000 (100)	669000 (100)	21706000 (100)
ipv340 (thrown things that could hurt you)	not in the past 12 months	19812000 (99.88)	1158000 (96.26)	523500 (78.25)	21493000 (99.01)
	One or more in the past 12 months	24000 (0.12)	45000 (3.74)	145500 (21.75)	215000 (0.99)
	Total	19835500 (100)	1203000 (100)	669000 (100)	21708000 (100)
ipv345 (slapped)	not in the past 12 months	19789500 (99.80)	1149500 (95.55)	496000 (73.97)	21435000 (98.76)
	One or more in the past 12 months	40000 (0.20)	53500 (4.45)	175000 (26.10)	268500 (1.24)
	Total	19829500 (100)	1203000 (100)	670500 (100)	21703500 (100)

Supplementary Table 5: GSS-V (2014) IPV Questions

Variable Name	Length/Position	Question Name	Concept	Question Text (Has an intimate partner ever done any of the following?)	Source*
IPV_100	1.0/614	IPV_Q100	IPV (Since 15) - Jealous/ doesn't want you to talk to men/women	Been jealous and didn't want you to talk to other men or women	EFP_Q230 - revised
IPV_105	1.0/615	IPV_Q105	IPV (Since 15) - Harms or threatens to harm pet(s)	Harmed, or threatened to harm your pets	EFP_Q245 - revised
IPV_110	1.0/616	IPV_Q110	IPV (Since 15) - Demands to know who you are with/ where you are	Demanded to know who you were with and where you were at all times	EFP_Q250 - revised
IPV_115	1.0/617	IPV_Q115	IPV (Since 15) - Put down/ called names	Put you down or called you names to make you feel bad	EFP_Q220 - revised
IPV_120	1.0/618	IPV_Q120	IPV (Since 15) - Forces you to give money, possessions	Forced you to give them money or possessions	EFP_Q280 - revised
IPV_195	1.0/635	IPV_Q195	IPV (Since 15) - Threatened to hit resp. with fist/weapon	Threatened to hit you with their fist or anything that could hurt you	PSP_Q110 - revised
IPV_200	1.0/636	IPVQ200	IPV (Since 15) - Damaged/ destroyed possessions or property	Damaged or destroyed your possessions or property	EFP_Q260 - revised
IPV_205	1.0/637	IPV_Q205	IPV (Since 15) - Thrown things that could have hurt	Thrown anything at you that could have hurt you	PSP_Q120 - revised
IPV_210	1.0/638	IPV_Q210	IPV (Since 15) - Slapped respondent	Slapped you	PSP_Q140 - revised
IPV_215	1.0/639	IPV_Q215	IPV (Since 15) - Beaten respondent	Beaten you	PSP_Q170 - revised

Note, for all items, Universe is EVERPART = 1, Respondents who have been in an intimate partner relationship at some point in their lives. * General Social Survey, Victimization, 2014

Initial Response Scale: Yes - 1, No - 2, Valid skip - 6, Don't know - 7, Refusal -8, Not stated -9; for 'Yes' response, the CASr-SF resonse scale was used to determine frequency: Never since age 15 - 00, Not in the past 12 months - 01, Once in the past 12 months - 02, A few times in the past 12 months - 03, Monthly in the past 12 months - 04, Weekly in the past 12 months - 05, Daily or almost daily in the past 12 months - 06, Valid skip - 96, Don't know - 97, Refusal - 98, Not stated - 99

The following scoring notes were indicated:

The IPV_D variables are the analytical versions of the IPV_Q variables pertaining to past 12 month frequency of IPV, adjusted to account for different reasons a valid skip may have been applied and to make it easier for the correct denominator for analysis to be recognized. Respondents who were 96 - VS in the initial IPV_235-IPV_365 were recoded into one of three categories depending on their responses:

0 - Those who were married, common-law, or had contact with a partner in the past 12 months but had not experienced the specific type of violence in their lifetime were recoded from valid skip to "Never"

96 - Those who were valid skips in the initial question because they had never had a partner or had not had any contact with a partner in the past 12 months remained valid skips

99 - Those who were married, common-law, or had contact with a partner in the past 12 months but did not answer the corresponding lifetime question were recoded from valid skip to "not stated"

Appendix 2: Scoring and Syntax for the 16-Item CASr-SF

The CASr-SF was developed as a measure of IPV severity in the previous 12 months based on continuous scores. Where relevant, these scores can be used to classify cases by IPV exposure. The scoring approaches for IPV Severity and Classification of IPV Exposure are described below.

Computing IPV Severity Scores

Total Severity of IPV Scores can be computed using responses to questions that ask about the frequency of each item occurring in the past 12 months (ranging from 'not at all in the past 12 months' to 'daily/almost daily). The possible range of scores is 0-80.

Separate scores for severity of physical abuse, sexual abuse, and psychological abuse can also be computed using items that correspond to those subscales:

- Physical abuse (6 items): 1, 3, 6, 7, 11, 13 (Possible Range: 0 - 30)
- Sexual Abuse (2 items): 4 and 8 (Possible Range: 0 - 10)
- Psychological Abuse (8 items): 2, 5, 9, 10, 12, 14, 15, 16 (Possible Range: 0 - 40)

Naming Conventions for Frequency Variables

Name each of the frequency variables as follows to correspond with its number on the scale: CASr01f, CASr02f, CASr03f, CASr04f, CASr05f, CASr06f, CASr07f, CASR08f, CASr09F, CASr10f, CASr11f, CASr12f, CASr13f, CASr14f, CASr15f, CASr16f

Values labels for Response Options

- 0 - Not in the past 12 months
- 1 - Once
- 2 - A few times
- 3 - Monthly
- 4 - Weekly
- 5 - Daily/almost daily

Computing Total Severity of IPV Scores

These scores reflect the mean of all 16 items for cases where there are responses to at least 70% of items. The syntax uses the case-specific mean of the remaining items to impute the value of missing responses. The possible range of scores is 0 to 80. If a case does not contain responses to at least 70% of items, it should be counted as missing (no score computed).

SPSS syntax for Total IPV Severity Scores

**Create total severity score based on means of frequency responses with at least 70% completion.

```
COMPUTE CASrSF_TOT=mean.12 (CASr01f, CASr02f, CASr03f, CASr04f, CASr05f, CASr06f,
CASr07f, CASr08f, CASr09f, CASr10f, CASr11f, CASr12f, CASr13f, CASr14f, CASr15f, CASf16f)*16.
EXECUTE.
```

```
VARIABLE LABELS CASrSF_TOT  'CASrSF TOTAL SEVERITY SCORE'.
EXECUTE.
```

Computing Subscale Scores for Severity of IPV

Separate scores for Severity of Physical, Sexual and Psychological IPV are computed using items assigned to each subscale in a similar fashion as for total severity scores.

For the physical and psychological abuse subscales:

The Syntax uses case-specific mean substitution in the same way as for total scores (in cases where at least 70% of items have responses). When less than 70% of items in the subscale have responses, no score is can be computed (the variable is marked as missing).

For the Sexual Abuse Subscale:

Since this subscale includes only 2 items, a score can be computed only for cases with responses for both items. When responses are missing for either or both items, this variable should be counted as missing (no subscale score can be computed).

SPSS syntax to create CASR-SF Subscale scores

```
**create subscales for physical, sexual and psychological abuse.
```

Physical Abuse Subscale:

```
COMPUTE CASrSF_physical=mean.5 (CASr01f,CASr03f,CASr06f,CASr07f,CASr11f,CASr13f)*6.
EXECUTE.
VARIABLE LABELS CASrSF_physical  'CASrSF Physical SCORE with mean sub'.
EXECUTE.
```

Psychological Abuse Subscale:

```
COMPUTE CASrSF_psych=mean.6 (CASR02F,CASR05F,CASR09F,CASR10F,CASR12F,CASR14F,CASR15F,CASR16F)*8.
EXECUTE.
VARIABLE LABELS CASrSF_psych  'CASrSF Psych SCORE-with mean sub'.
EXECUTE.
```

Sexual Abuse Subscale:

```
COMPUTE CASrSF_sexual= CASR04F+CASR08F.
EXECUTE.
VARIABLE LABELS CASrSF_sexual  'CASrSF Sexual SCORE'.
EXECUTE.
```

Classification of IPV Exposure

CASr-SF items were included in a recent Canadian population survey of gender-based violence called the Survey of Safety in Public and Private Spaces (SSPPS). Using latent class analysis (LCA), we identified distinct patterns of IPV among adults (19+) using SSPPS data.

We examined, theoretically and empirically, how different scoring thresholds on the three CASr-SF subscales (physical, psychological, sexual) were associated with the placement of cases on the LCA patterns. Our goal was to differentiate those who were experiencing patterns of IPV that included ongoing acts of abuse of multiple kinds, and/or severe acts of violence, from those experiencing no or very low levels of aggressive behaviours in the context of poor relationship interactions. Theoretically, this aligns with emerging understanding of what Michael Johnson calls "intimate terrorism" (and the related "violent resistance") versus "situational conflict" which is often bi-directional and less severe and harmful in nature.

Using this approach, we identified a three-level classification of IPV exposure:

- IPV Positive (meets threshold criteria, as noted below);
- Subthreshold IPV (a non-zero score that does not meet threshold criteria)
- No IPV (true zeros – an important category for general population samples).

To ensure that those experiencing the most severe act of physical violence, even once, are not excluded from the IPV Positive group, we include an additional step to ensure that any experience of "choking" (i.e., strangulation) in the past 12 months meets the threshold for IPV.

Scoring Approach for IPV Exposure Classification

Step 1: Use the following cut scores to create three new threshold variables from existing subscale scores:

- Physical Abuse (possible range: 0-30, IPV positive threshold > 1)
- Psychological Abuse (possible range: 0-40, IPV positive threshold > 4)
- Sexual Abuse (possible range: 0-10, IPV positive threshold > 0)

Step 2: Classify cases as IPV Positive if they meet one or more of these 3 thresholds.

Step 3: Convert non-IPV positive cases to IPV positive where there is a non-zero score on item 7 ("Choked me"), regardless of whether initial thresholds have been met

Step 4: Classify remaining scores into two groups based on their scores: no IPV (Total Severity Score=0) or subthreshold IPV (non-zero but does not meet threshold scoring criteria)

SPSS Syntax for Classification Scoring

```
RECODE CASrSF_physical (0 thru 1=0) (2 thru Highest=1) INTO Physical_Thresh.
EXECUTE.

VARIABLE LABELS Physical_Thresh 'Meets Physical Abuse Threshold'.
EXECUTE.

VALUE LABELS Physical_Thresh
0 'Does not meet Physical Abuse Threshold'
1 'Meets Physical Abuse Threshold'.
EXECUTE.

RECODE CASrSF_psych (0 thru 4=0) (5 thru Highest=1) INTO Psych_Thresh.
```

```
EXECUTE.

VARIABLE LABELS Psych_Thresh 'Meets Psychological Abuse Threshold'.
EXECUTE.

VALUE LABELS Psych_Thresh
0 'Does not meet Psychological Abuse Threshold'
1 'Meets Psychological Abuse Threshold'.
EXECUTE.

RECODE CASrSF_sexual (0=0) (1 thru Highest=1) INTO Sexual_Thresh.
EXECUTE.

VARIABLE LABELS Sexual_Thresh 'Meets Sexual Abuse Threshold'.
EXECUTE.

VALUE LABELS Sexual_Thresh
0 'Does not meet Sexual Abuse Threshold'
1 'Meets Sexual Abuse Threshold'.
EXECUTE.

IF  (Physical_Thresh = 1 or Psych_Thresh = 1 or Sexual_Thresh = 1 or casr07f_r > 0) IPV_Threshold=2.
EXECUTE.
IF  (Physical_Thresh = 0 and Psych_Thresh = 0 and Sexual_Thresh = 0 and casr07f_r = 0 and CASrSF_Total>0)
IPV_Threshold=1.
EXECUTE.
IF (CASrSF_Total=0) IPV_Threshold=0.
Execute.

VARIABLE LABELS IPV_Threshold  'IPV Threshold Category'. EXECUTE.

VALUE LABELS IPV_Threshold
0 'No IPV'
1 'Subthreshold IPV'
2 'IPV Positive'.
Execute.
```