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Prevalence of interpersonal violence against women and men in New Zealand: results of a cross-sectional study

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Interpersonal violence is a global health issue and includes violence by strangers and acquaintances as well as intimate partner violence (IPV).^{1,2} Understanding the prevalence and pattern of violence exposure at the population level is fundamental to developing and implementing public health policies and responses.^{3,4} Frequently, the available evidence for understanding interpersonal violence utilises data from the most extreme cases,⁵⁻⁷ or data from administrative sources.⁸

Population-based surveys have emerged as the gold standard for assessing the prevalence of violence against women.⁹ However, as the primary purpose of these studies has been to assess IPV, they provide limited information on interpersonal physical violence by non-partners.^{10,11} Other population-based violence surveys do not disaggregate prevalence data based on non-partner or partner violence.¹² Additionally, many previous studies have focused on women of reproductive age,¹³ so there is a paucity of data on violence exposure among older adults.¹⁴

While studies frequently do not survey men,^{15,16} studies that have explored gender differences in interpersonal violence tend to focus on IPV exposure. Population-based studies from high income countries have found relatively similar prevalence rates for physical and psychological IPV in men and women.^{13,17-19} Others have noted that there are substantial gender differences in the frequency, severity and impact (including

Abstract

Objective: To determine prevalence rates of non-partner and partner violence (IPV) in men and women from a population-based study.

Methods: We recruited 2,887 randomly selected respondents (1,464 women and 1,423 men) from three regions of New Zealand between 2017 and 2019. Face-to-face interviews using a questionnaire adapted from the WHO multi-country study on violence against women was used for data collection.

Results: Physical violence by non-partners was most commonly experienced by men (39.9% lifetime exposure) compared with 11.9% of women. More women (8.2%) experienced lifetime non-partner sexual violence compared with men (2.2%). About 29% of men and women reported at least one act of physical-IPV in their lifetime, and about 12.4% of women and 2.1% of men reported at least one act of lifetime sexual IPV. More women than men reported serious injuries, fear, and physical and mental health impacts following IPV experience.

Conclusions: These findings indicate high prevalence of interpersonal violence exposure in the population, with marked gender differences in the types and impacts of violence reported.

Implications for public health: Study results call for the urgent implementation of violence prevention programs, and funding for both services to rehabilitate people who have perpetrated violence and services to support recovery of those affected.

Key words: interpersonal violence, intimate partner violence, prevalence rates

injuries and fear) of IPV. Women report experience of more frequent and more severe acts of physical violence,²⁰ more sexual violence, and greater physical and mental health consequences.¹⁷ Some researchers suggest that men may experience more psychological IPV.^{21,22}

In this study, we utilised data from a population-based face-to-face survey to assess the prevalence of violence against women and men, by non-partners and by intimate partners. The study included adults aged 16 years and over. Types of interpersonal violence explored included: non-partner

physical and sexual violence, and physical, sexual and psychological IPV. In addition, the study reports the gender of the person who perpetrated the violence, and, for IPV, compares the frequency, severity, and the self-reported impact of IPV on the physical and mental health of the respondents.

Methods

The 2019 New Zealand Family Violence Survey is a cross-sectional population-based study. Respondents were recruited from three regions: Waikato, Auckland and Northland

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for 24 months, between 2017 and 2019. Respondents were men and women aged 16 years and older who lived in the household for at least one month, slept four or more nights a week in the house, and could speak conversational English.

Ethics approval was received from The University of Auckland Human Participants Ethics Committee (reference number 2015/018244).

Sampling: Random sampling was conducted using primary sampling units (PSU) (using meshblock boundaries, the smallest geographical units used by Statistics New Zealand). Every second and sixth house was selected from a random starting point within each PSU. Rest homes, retirement villages, and short-term residential institutions were excluded. Women and men were recruited from different PSUs for safety reasons, and only one person per household was randomly selected as a respondent, to ensure the content of the interview was private. In households with more than one eligible resident, the participant was randomly selected from a random number sheet.

Included sample

Of 9,568 households approached, 1,532 were ineligible due to speaking a language other than English ($n=110$), vacancy or inaccessibility of dwelling ($n=760$), and absence of household members for an extended period ($n=662$). Of the remaining 8,306, 1,804 households refused to participate (22.2%). Of the 6,232 households who agreed to participate, 1,162 individuals were ineligible ($n=1070$) or incapacitated ($n=92$), or spoke a language other than English ($n=109$), and another 251 were not at home (despite up to seven visits from the interviewer). Of the remaining 4,710 eligible individuals, 1,767 (37.1%) refused, leaving 2,944 respondents (62.5%; $n=1,495$ women, and $n=1,449$ men) who agreed to participate (62.27%). Fifty-five respondents did not complete the interview, leaving 2,888 completed interviews ($n=1,464$, women, $n=1,423$ men, $n=1$ other [excluded from subsequent analyses]). Of these, 2,786 respondents were ever-partnered, defined as ever married, cohabiting, or currently in a sexual or dating relationship ($n=1,431$ women, $n=1,355$ men). Weighting variables were available for 2,746 ever-partnered participants ($n=1,414$ women, $n=1,332$ men).

Data collection

Data collection occurred through private face-to-face interviews, with no child over the age of two years present. Interviewers received training in the interview protocol, including safety and ethics considerations. At the conclusion of the interview, regardless of violence disclosure status, all respondents were provided with a referral card with contact details for local support services, so that they could access further support if required. Quality assurance included interview audits, regular meetings and review of completed interviews. Interviews took place in respondents' homes or other private locations. All respondents provided written informed consent before the interview commenced, and were reminded of their right to refuse to answer or stop the interview at any time before the questions on violence experience commenced.

The questionnaire was based on the WHO Multi-Country Study on Violence Against Women (VAW).²³ The 12-domain questionnaire included sections on respondents' socio-demographic characteristics, current and previous partnership status, general health, any experience of violence including non-partner PV (two questions) and IPV (five questions for physical IPV, three for sexual IPV and four for psychological IPV). Impact of the violence experience was also assessed. The questionnaire was pre-tested with a convenience sample. Further details can be found in the methods paper.²⁴

Outcome variable measures

Outcome variables were defined as a 'yes' responses to the following questions:

Non-partner violence (NPV).

NPV Physical Violence (NPV-PV): 'Since the age of 15, has anyone ever hit, beaten or done anything else to hurt you physically?' (for respondents with current or past partner: other than your partner).

NPV sexual violence (NPV-SV): 'Since the age of 15, has anyone ever forced you to have sex or to perform a sexual act when you did not want to, for example, by threatening you, holding you down or putting you in a situation that you could not say no?' (for respondents with current or past partner: other than your partner).

IPV. To measure physical, sexual, and psychological IPV, respondents were asked

if any current or previous partner had ever done any of the following acts:

IPV physical violence (IPV-PV): 'Has any partner ever a) slapped you or thrown something at you that could hurt you? b) pushed or shoved you or pulled your hair? c) hit you with their fist or with something else that could hurt you? d) kicked, dragged or beaten you up? e) choked or burnt you on purpose? or f) threatened to use or actually used a gun, knife, or other weapon against you?'. The first two questions were categorised as 'moderate' and the last four questions were categorised as severe IPV-PV.

IPV sexual violence (IPV-SV): a) 'Has any partner ever forced you to have sexual intercourse when you did not want to, for example by threatening you or holding you down?' b) 'Did you ever have sexual intercourse you did not want to because you were afraid of what your current or any other partner might do if you refused?'; c) 'Did your current partner or any other partner ever force you to do anything else sexual that you did not want or that you found degrading or humiliating?'

IPV psychological abuse (IPV-PA): 'Has any current or previous partner ever: a) Insulted you or made you feel bad about yourself? b) Said or did something that made you feel humiliated in front of other people? c) Did things that made you feel scared or intimidated? d) Threatened to harm you or someone you care about? e) Destroyed things that are important to you?'. We report on prevalence of two or more acts of IPV-PA to distinguish this from a one-off incident, as there is no consensus on how to measure IPV-PA.²⁵ The first two questions were categorised as moderate PA acts and the last three questions were categorised as severe acts of IPV-PA.

Recency and frequency of IPV. Following each IPV question to which respondents gave a 'yes' answer, they were asked if 1) it had happened within the past 12-months, or before, to determine lifetime prevalence, and 2) whether it happened once, a few times, or many times. In addition, for each group of questions (IPV-PV, IPV-SV, IPV-PA), for those who reported at least one act, respondents were asked which partner did these things (current, most recent, previous). Multiple answers were possible.

Impact of IPV. Respondents who reported at least one experience of IPV-PV or IPV-SV were asked if the experience resulted in any injury, and whether they required clinical care

or hospitalisation for this injury. Those who reported any experience of IPV were asked if these experiences affected their physical or mental health (two separate questions). Additionally, these respondents were asked if they had ever sought help from service providers, i.e. police, social services, legal advisors, hospitals/clinics, mental health services, general practitioners/primary care physician, courts, women's refuge/shelter, local leader, religious leader.

Perpetrator gender for NPV and IPV. For reported violence experienced, respondents were asked to indicate if the perpetrator/s were female/male/both.

Statistical analyses

Descriptive data analyses were performed in SAS statistical package version 9.5 (SAS Institute, Cary, NC, USA).

Analyses included all respondents who completed the questionnaire for NPV-PV and NPV-SV (n=2,887), and were limited to ever-partnered respondents for IPV outcomes (n=1,431 women, and n=1,355 men). Frequency, weighted percentages and 95% confidence intervals (95% CIs) were calculated for each gender separately. Chi-square test statistics (Fisher exact test) were used to compare prevalence rates between genders. All analyses were conducted with survey procedures to allow for stratification by location (3 regions), clustering by primary sampling units, and weighting to account for the number of eligible participants in the household.

Results

Table 1 compares demographic characteristics of respondents with the whole NZ population from the 2018 Census. The survey sample had a smaller proportion of respondents in the 15-19 and 20-29 year age ranges, and more respondents aged 60-79 years old compared with the general population. Respondents had slightly higher individual and household incomes relative to the general population. Ethnic composition of the sample was closely comparable to the general population.

Lifetime prevalence rates for NPV-PV since the age of 15 years were 11.9% (95%CI=10.1, 13.7) for women and 39.9% (95%CI=36.7, 43.0) for men. Men were the main perpetrators of NPV-PV in both genders, accounting for 57.2% and 91.6% of reported experiences in

women and men, respectively. Frequency: about 58% of women reported more than one NPV-PV experience, compared with 71% of men. For women, NPV-PV was mainly perpetrated by parents (36.0%), followed by relatives/family members (27.5%). For men, NPV-PV was mainly perpetrated by a stranger (52.4%), followed by someone from school (45.7) (Table 2).

The prevalence rate of NPV-SV since the age of 15 years was four times higher in women (8.2%, 95% CI=6.8, 9.6) compared with men (2.2%, 95%CI=1.3, 3.1). Men were reported as the perpetrators of 97.7% of reported NPV-SV against women, and 69.2% of NPV-SV against men. Strangers were the main perpetrators of NPV-SV, accounting for around 32% of

reported NPV_SV experiences in women and 37.5% of it in men. For women, for 11.7% of NPV-SV a father/step-father was reported as the perpetrator. No men reported sexual violence from a father/step-father so the prevalence of sexual violence by these perpetrators cannot be estimated (Table 2).

Table 3 shows lifetime and 12-month IPV prevalence reported by ever-partnered men and women. The lifetime prevalence rates for IPV-PV were 28.0% for women (26.9% moderate, 7.6% severe) and 29.4% for men (28.2% moderate, 9.4% severe). Frequency: 64.7% of women versus 56.3% of men reported more than one experience of IPV-PV (p of difference<0.001). Past 12-month physical IPV prevalence rate was 2.4% (2.1%

Table 1: 2019 NZ family violence study sample demographic characteristics compared with the general New Zealand population.

Gender	NZ population			Survey respondents		
	Female (%)	Male (%)	Total (%)	Female n (%)	Male n (%)	Total n (%)
	1,927,086 (50.5)	1,888,929 (49.5)	3,816,015	1,445 (50.8)	1,400 (49.2)	2,845
Age groups^a						
15-19 ^b	7.9	8.3	8.1	41 (5.1)	55 (6.7)	96 (5.9)
20-29	17.4	18.4	17.9	138 (12.1)	149 (14.6)	287 (13.4)
30-39	16.5	16.2	16.4	224 (14.5)	212 (14.9)	436 (14.7)
40-49	16.6	15.9	16.2	253 (18.5)	260 (16.9)	513 (17.7)
50-59	16.6	16.0	16.3	277 (18.8)	276 (19.7)	553 (19.3)
60-69	13.6	13.2	13.4	265 (16.7)	235 (14.4)	500 (15.6)
70-79	6.2	8.3	7.2	184 (10.6)	150 (9.1)	334 (9.8)
≥ 80	5.2	3.7	4.50	63 (3.7)	61 (3.6)	124 (3.7)
Ethnicity^{a,c}						
Māori	14.6	16.5	14.6	186 (14.5)	127 (9.3)	313 (11.9)
Pasifika	7.1	6.7	7.2	70 (7.7)	88 (8.1)	158 (7.9)
Asian	13.2	14.5	13.3	159 (12.2)	213 (19.1)	372 (15.7)
MELAA	1.3	1.4	1.3	22 (1.3)	22 (1.6)	44 (1.5)
European	62.8	59.6	62.4	1008 (64.2)	948 (61.8)	1956 (63.0)
Individual income^{a,d}						
Zero	8.2	5.4	6.8	94 (7.2)	76 (6.2)	170 (6.7)
<\$25,000	41.3	29.4	35.5	466 (35.7)	224 (18.9)	697 (27.1)
\$25,001-\$50,000	27.0	24.8	25.9	380 (26.9)	280 (21.6)	660 (24.2)
\$50,001-100,000	19.4	29.0	24.1	341 (25.3)	478 (33.6)	819 (29.6)
>\$100,000	4.2	11.3	7.6	74 (4.8)	302 (19.7)	376 (12.4)
Household income^{a,e}						
<\$50,000	NA	NA	33.6	389 (29.9)	268 (20.3)	657 (24.9)
\$50,000-\$100,000	NA	NA	29.3	455 (36.1)	421 (31.8)	876 (33.9)
>\$100,000	NA	NA	37.1	427 (33.9)	624 (47.9)	1051 (41.2)
Area level deprivation tertiles^f						
Least deprived	31.1	31.6	30.0	423 (27.2)	359 (24.4)	782 (25.8)
Moderately deprived	39.7	39.8	40.0	586 (39.3)	634 (44.3)	1220 (41.8)
Most deprived	29.0	28.5	30.0	435 (33.5)	407 (31.3)	842 (32.4)

Notes:

a: Census 2018 for the population.

b: Survey respondent's age groups started from 16 years whereas it is from 15 years in Census data.

c: Available data for ethnicity in Census= 4,696,913 individuals. 'Others' are integrated into one of the five categories in the survey database whereas it is a separate category in Census data (comprised of 1.25% of males and 0.92% of females in the population).

d: Available data for individual income in Census 2018 is from 3,755,730 individuals.

e: Available data for household income in Census 2018 is from 1,526,958 households.

f: 2013 IMD Indices of Multiple deprivation³⁷

NA: Not Available

moderate, 1.3% severe) for women compared with 4.9% (4.8% moderate, 2.1% severe) for men.

Of serious lifetime IPV-PV acts, prevalence estimates were 'Hit with a fist or with something else that could hurt': 12.9% for women and 11.2% for men ($p=0.20$). 'Kicked, dragged or beaten up': 8.4% for women and 2.9% for men ($p<0.001$). 'Choked or burnt on purpose': 5.3% for women and 0.8% for men ($p<0.001$). 'Threatened to use or actually used a gun, knife, or other weapon against': 5.1% for women and 3.1% for men ($p<0.001$).

For 12-month prevalence, men reported significantly higher prevalence of moderate acts of IPV-PV than women. 'Being slapped or had something thrown at' were reported by 3.7% for men and 1.3% for women, and

'Pushed, shoved or pulled hair' were reported by 18.8% of men and 8.6% of women ($p=0.004$ and $p=0.006$, respectively).

For any experience of IPV-PV, 18.5% of women compared with 33.0% of men reported that this was perpetrated by a current partner, while 61.4% of women and 55.0% of men reported that this was perpetrated by a previous partner. There were 23.4% of women and 13.7% of men who reported that IPV-PV experience was perpetrated by the most recent partner.

Women reported a significantly higher lifetime prevalence of IPV-SV (12.4%; 95%CI=10.71, 14.10) compared with 2.1% of men (95%CI=1.22, 2.90). Frequency: 57.7% of women compared with 20.6% of men experienced IPV-SV more than once

($p=0.004$). Past 12-month IPV-SV was reported by 0.9% of women and 0.5% of men ($p=0.26$).

Overall, 30.9% of women reported lifetime IPV-PV and/or IPV-SV compared with 29.9% of men. Past 12-month experience of IPV-PV and/or IPV-SV was 3.0% for women and 5.1% for men ($p=0.002$).

Lifetime prevalence rates for two or more acts of IPV-PA were 33.0% for women, and 19.3% for men ($p<0.001$).

Lifetime prevalence rates for 'Insulted or made feel bad about self' were 40.4% in women, and 34.1% in men ($p=0.004$), and for 'humiliated in front of others' were 29.7% in women, and 19.8% in men ($p<0.001$).

For severe IPV-PA, the prevalence estimates were 'Did things that made respondent feel scared or intimidated': 22.6% for women and 5.9% for men ($p<0.001$), 'Threatened to harm': 14.6%, for women and 5.5% for men ($p<0.001$), and 'Destroyed things': 13.0% of women and 9.3% for men ($p<0.001$).

Past 12-month prevalence of two or more acts of IPV-PA was reported by 5.0% of women and 5.2% of men ($p=0.83$). For each different act of IPV-PA there were relatively similar rates reported between genders, with the exception of 'insulted or made to feel bad' which was reported more frequently by men than women (13.0% in men versus 10.2% in women; $p=0.04$) (Table 4). Like IPV-PV, among reporters of any IPV-PA, 31.7% of women and 40.1% of men indicated that the perpetrator was their current partner.

Supplementary Figure 1 shows that a larger proportion of women reported multiple forms of lifetime IPV experience compared with men.

Impact of IPV. Self-reported impacts of experience of IPV-PV, IPV-SV, and IPV-PA are shown in Table 4. Among ever-partnered participants, a significantly higher proportion of women reported being afraid of their partner, 7.7% compared with 1.5% of men ($p<0.001$).

Among those who experienced lifetime IPV-PV and/or IPV-SV, a higher proportion of women reported injuries (40.8%, 95%CI=35.37, 46.15) compared with (14.7%, 95%CI=10.77, 18.67) men ($p<0.001$). In the past 12 months, seven men reported being injured (17.1%, 95%CI=4.06, 30.23) compared with 8 women (6.5%; 95%CI=1.82, 11.26) ($p=0.06$ - data not shown).

Among those who reported experiencing at least one episode of psychological, physical,

Table 2: Reported prevalence of non-partner physical and sexual violence since the age of 15, the 2019 NZ family violence study.

	Women		Men		p-value for Chi-square
	Since 15 years n(%)	95% (CIs)	Since 15 years n(%)	95% (CIs)	
Physical violence	178 (11.9)	10.09, 13.73	569 (39.9)	36.74, 43.08	<0.001
Gender of the perpetrator^a					
Male	103 (57.2)	48.89, 65.53	525 (91.6)	89.00, 94.24	<0.001
Female	59 (31.7)	24.32, 39.14	13 (2.2)	0.85, 3.61	
Both	14 (11.1)	5.28, 16.84	31 (6.1)	3.68, 8.43	
How many times^a					
Once	73 (42.4)	33.50, 51.26	163 (29.2)	25.30, 33.12	0.005
2-5	69 (37.6)	29.54, 45.69	298 (52.7)	48.26, 57.08	
>5	35 (20.0)	13.08, 26.92	105 (18.1)	14.45, 21.78	
Who did this to you?^{a,b}					
Parents	65 (36.0)	28.22, 43.82	55 (9.8)	7.00, 12.55	<0.001
Relatives/family	45 (27.5)	20.04, 34.93	45 (8.5)	5.71, 11.32	<0.001
A friend or neighbour	12 (8.0)	3.42, 12.70	47 (8.5)	5.87, 11.17	0.87
Someone at school or work	26 (13.7)	8.45, 19.04	258 (45.7)	40.93, 50.41	<0.001
Stranger/other	40 (22.7)	16.14, 29.36	305 (52.4)	47.62, 57.12	<0.001
Sexual violence	126 (8.2)	6.78, 9.65	30 (2.2)	1.35, 3.10	<0.001
Gender of the perpetrator^a					
Male	110 (97.7)	93.17, 100.00	20 (69.2)	51.17, 87.29	-
Female	- ^d	-	9 (30.7)	12.71, 48.83	
Both	*	0, 6.82	-	-	
How many times^a					
Once	70 (55.8)	46.34, 65.25	12 (47.4)	26.90, 67.83	0.38
2-5	33 (29.7)	20.38, 39.03	8 (26.3)	7.89, 44.84	
>5	16 (14.5)	7.18, 21.81	8 (28.6)	11.84, 45.30	
Who did this to you?^{a,b}					
Parents	12 (11.7)	4.86, 18.58	-	-	NA
Relatives/family	22 (20.7)	11.94, 29.44	*	0.24, 24.76	0.33
A friend or neighbour	30 (24.8)	16.34, 33.31	8 (35.0)	13.99, 50.01	0.34
Someone at school or work	17 (13.8)	6.98, 20.60	6 (17.5)	4.36, 30.64	0.60
Stranger/other	42 (31.7)	22.65, 40.79	13 (37.5)	20.37, 54.63	0.54

Notes:
a: Percentages are calculated for those with an experience of physical or sexual violence
b: Total % exceeds 100 as some experienced more than one event by different perpetrators.
c: Weighted percentages and 95% Confidence intervals for percentages are calculated.
d: There is no observation for cells with a -.
e: For the sake of privacy, cells with fewer than 5 respondents were suppressed and shown as *.

Table 3 - Reported Lifetime and past 12-month prevalence of physical or sexual violence by an intimate partner by gender, the 2019 NZ family violence study.

	Since the age of 15											
	Women						Men					
	N c (%)	95%CI	N (%)	95%CI	p-value	95%CI	N (%)	95%CI	N (%)	95%CI	p-value	
Physical IPV^a	404 (28.0)	25.32, 30.76	383 (29.4)	26.36, 32.49	0.50	1.49, 3.39	28 (2.4)	1.49, 3.39	60 (4.9)	3.48, 6.31	0.004	
Moderate	387 (26.9)	24.27, 29.59	366 (28.2)	25.15, 31.23	0.54	0.46, 1.24	24 (2.1)	0.46, 1.24	58 (4.8)	0.72, 3.36	0.002	
Severe	102 (7.6)	6.06, 9.20	117 (9.4)	7.65, 11.17	0.13	0.59, 1.97	15 (1.3)	0.59, 1.97	24 (2.1)	1.18, 3.07	0.15	
Gender of the perpetrator^{a,b}												
Male	393 (96.5)	93.92, 99.01	6 (1.6)	0.28, 3.03	<0.001	-	-	-	-	-	-	
Female	8 (3.1)	0.62, 5.62	378 (98.3)	96.97, 99.72		-	-	-	-	-	-	
Both	*	0, 0.99	*	-		-	-	-	-	-	-	
How many acts of physical IPV^{a,b}												
One	139 (35.3)	30.16, 40.38	156 (43.1)	37.58, 48.66	<0.001	31.17, 75.35	15 (54.8)	31.17, 75.35	31 (48.1)	38.27, 3.37	0.85	
2-5	231 (56.6)	51.31, 61.96	225 (56.3)	50.80, 61.72	0.003	21.99, 36.72	12 (42.8)	21.99, 36.72	28 (49.4)	35.01, 60.07		
>5	34 (8.1)	5.31, 10.87	*	0.00, 1.51	0.10	0.7, 1.9	*	0.7, 1.9	*	0.00, 4.83		
Which partner did any of the acts^{a,b}												
Current partner	71 (18.5)	14.34, 22.59	125 (33.0)	27.40, 38.71	<0.001	-	-	-	-	-	-	
Most recent partner	88 (23.4)	18.33, 28.55	50 (13.7)	9.75, 17.76	0.003	-	-	-	-	-	-	
Previous partner	256 (61.4)	56.09, 66.73	213 (55.0)	49.46, 60.60	0.10	-	-	-	-	-	-	
Sub-categories of physical IPV^a												
Being slapped or had something thrown something at												
Once	293 (20.2)	17.93, 22.44	308 (23.3)	20.38, 26.31	0.09	0.59, 1.97	15 (1.3)	0.59, 1.97	45 (3.7)	2.51, 4.89	0.004	
Few times	92 (6.5)	5.20, 7.76	121 (9.5)	7.52, 11.54	<0.001	0.03, 0.67	5 (0.3)	0.03, 0.67	14 (1.2)	0.46, 1.97	0.007	
Many times	132 (9.3)	7.79, 10.81	141 (10.6)	8.74, 12.51		0.19, 1.3	8 (0.8)	0.19, 1.3	28 (2.2)	1.32, 3.06		
Many times	67 (4.7)	3.62, 5.82	27 (2.0)	1.21, 2.80		0, 0.36	*	0, 0.36	*	0.00, 0.36		
Pushed, shoved or pulled hair												
Once	292 (20.3)	17.91, 22.70	220 (16.8)	14.44, 10.09	0.04	4.59, 12.70	18 (8.6)	4.59, 12.70	37 (18.8)	12.38, 25.30	0.006	
Few times	86 (6.2)	4.79, 7.65	63 (5.3)	3.84, 6.70	<0.001	0.21, 1.30	8 (0.7)	0.21, 1.30	14 (1.3)	0.50, 1.59	0.13	
Many times	128 (8.5)	6.97, 10.01	129 (9.5)	7.87, 11.15		0.05, 1.00	6 (0.5)	0.05, 1.00	19 (1.4)	0.84, 2.14		
Many times	72 (5.2)	3.94, 6.53	19 (1.4)	0.75, 2.16		0.01, 0.95	*	0.01, 0.95	*	0.01, 0.59		
Hit with a fist or with something else that could hurt												
Once	192 (12.9)	11.00, 14.84	142 (11.2)	9.25, 13.08	0.20	0.31, 1.55	10 (0.9)	0.31, 1.55	20 (1.8)	0.95, 2.69	0.10	
Few times	49 (3.4)	2.27, 4.48	51 (4.2)	2.99, 5.50	<0.001	0.01, 0.59	*	0.01, 0.59	7 (0.7)	0.11, 1.35	0.32	
Many times	86 (5.8)	4.51, 7.02	70 (5.5)	4.10, 6.95		0.04, 1.12	5 (0.6)	0.04, 1.12	11 (0.9)	0.32, 1.49		
Many times	55 (3.6)	2.60, 4.62	16 (1.1)	0.55, 1.63		0.00, 0.17	*	0.00, 0.17	*	0.00, 0.45		
Kicked, dragged or beaten up												
Once	125 (8.4)	6.83, 10.05	37 (2.9)	1.94, 3.87	<0.001	0.02, 0.67	5 (0.3)	0.02, 0.67	*	0.00, 0.74	0.95	
Few times	27 (1.8)	1.09, 2.52	13 (1.0)	0.45, 1.61	<0.001	0.00, 0.28	*	0.00, 0.28	*	0.00, 0.29	NA	
Many times	48 (3.2)	2.12, 4.85	18 (1.5)	0.80, 2.22		0.00, 0.43	*	0.00, 0.43	*	0.00, 0.58		
Many times	50 (3.3)	2.32, 4.31	5 (0.3)	0.04, 0.56		0.00, 0.17	*	0.00, 0.17	*	-		
Choked or burnt on purpose												
Once	77 (5.3)	4.08, 6.54	11 (0.8)	0.30, 1.27	<0.001	0.00, 0.51	*	0.00, 0.51	*	0, 0.45	0.79	
Few times	33 (2.1)	1.39, 2.93	*	0.00, 0.29	<0.001	0.00, 0.43	*	0.00, 0.43	*	-	NA	
Many times	21 (1.4)	0.72, 2.08	6 (0.5)	0.08, 0.89		-	*	-	*	0, 0.35		
Many times	21 (1.6)	0.81, 2.34	*	0.00, 0.29		0.00, 0.17	*	0.00, 0.17	*	-		

Table 3 cont.: Reported lifetime and past 12-month prevalence of physical or sexual violence by an intimate partner by gender, the 2019 NZ family violence study.

	Women			Men			Past 12-month			
	N c (%)	95%CI	N (%)	95%CI	N (%)	95%CI	95%CI	N (%)	95%CI	p-value
Threatened to use or actually used a gun, knife, or other weapon against										
Once	75 (5.1)	3.94, 6.32	44 (3.1)	2.18, 3.99	5 (0.4)	0.03, 0.77		*	0.00, 0.73	0.86
Few times	25 (1.6)	0.95, 2.31	27 (2.0)	1.23, 2.76	*	0.00, 0.43		*	0.00, 0.45	NA
Many times	34 (2.3)	1.47, 3.07	15 (1.0)	0.47, 1.46	*	0.00, 0.43		*	0.00, 0.45	
Sexual IPV ^a	188 (12.4)	10.71, 14.10	27 (2.1)	1.22, 2.90	13 (0.9)	0.35, 1.40		6 (0.5)	0.07, 0.89	0.26
How many acts of sexual IPV^b										
One	82 (42.2)	35.08, 49.42	22 (79.4)	62.99, 95.83	11 (86.7)	66.4, 100		*	15.72, 100.0	NA
Two	58 (30.5)	23.99, 37.04	*	0, 25.22	-	-		*	0, 84.42	
Three	48 (27.2)	20.24, 34.22	*	0, 20.76	*	0, 33.59		*	-	
Gender of the perpetrator^b										
Male	184 (95.0)	97.73, 100.00	*	0, 25.30	-	-		-	-	
Female	*	0, 1.41	23 (87.9)	74.69, 100.00	-	-		-	-	
Both	*	0, 1.41	-	-	-	-		-	-	
Which partner did any of the acts^b										
Current parent	22 (11.3)	6.69, 15.84	*	0, 18.74		0.68				
Most recent partner	42 (23.0)	16.31, 29.69	6 (23.5)	7.07, 39.99		0.95				
Previous partner	129 (68.5)	61.58, 75.50	19 (70.6)	52.00, 89.17		0.84				
Sub-categories of sexual IPV^a										
Forced to have sexual intercourse										
Once	130 (8.7)	7.21, 10.17	8 (0.8)	0.22, 1.35	6 (0.35)	0.07, 0.63		*	0, 0.66	0.84
Few times	32 (1.9)	1.29, 2.56	*	0, 0.36	-	-		*	-	NA
Many times	67 (4.6)	3.48, 5.74	*	0, 0.85	6 (0.4)	0.07, 0.63		*	0, 0.45	
Had sexual intercourse because you were afraid of what they may do										
Once	14 (0.9)	0.43, 1.43	19 (1.3)	0.70, 1.97	8 (0.5)	0.14, 0.90		*	0, 0.62	0.39
Few times	74 (4.7)	3.61, 5.84	9 (0.7)	0.20, 1.01	6 (0.4)	0.07, 0.63		*	0, 0.18	NA
Many times	37 (2.6)	1.71, 3.43	*	0, 0.53	-	-		*	0, 0.29	
Forced to do something sexual that was humiliating or degrading										
Once	83 (5.8)	4.51, 7.14	7 (0.5)	0.06, 1.03	*	0, 0.51		*	0, 0.22	0.22
Few times	13 (0.9)	0.37, 1.49	*	0, 0.36	*	0, 0.35		*	0, 0.18	NA
Many times	49 (3.5)	2.50, 4.50	*	0, 0.70	*	0, 0.28		-	-	
Sexual and/or physical										
One of the two	450 (30.9)	28.19, 33.70	389 (29.9)	26.81, 33.00	36 (3.0)	1.94, 3.99		62 (5.1)	3.64, 6.51	0.02
Both	307 (21.4)	18.97, 23.84	368 (28.3)	25.64, 31.41	31 (2.6)	1.64, 3.59		58 (4.8)	3.38, 6.17	0.03
Psychological^a										
At least one act of psychological abuse ^a	686 (47.7)	44.52, 50.86	534 (40.0)	36.92, 43.15	167 (12.7)	10.71, 14.65		205 (15.2)	13.14, 17.31	0.08
At least two acts of psychological abuse ^a	472 (33.0)	30.27, 35.65	260 (19.3)	16.96, 21.68	66 (5.0)	3.70, 6.31		65 (5.2)	3.85, 6.54	0.83
At least three acts of psychological abuse ^a	287 (19.8)	17.54, 22.08	120 (9.1)	7.39, 10.89	20 (1.5)	0.79, 2.23		26 (1.9)	1.11, 2.75	0.45

Continued next page

Table 3 cont.: Reported lifetime and past 12-month prevalence of physical or sexual violence by an intimate partner by gender, the 2019 NZ family violence study.

	Since the age of 15						Past 12-month						
	Women			Men			Women			Men			
	N (%)	95%CI	N (%)	95%CI	N (%)	95%CI	N (%)	95%CI	N (%)	95%CI	N (%)	95%CI	p-value
<i>Gender of the perpetrator^a</i>													
Male	674 (97.7)	95.96, 99.38	10 (2.3)	0.78, 3.77	-	<0.001	-	-	-	-	-	-	-
Female	10 (2.1)	0.50, 3.66	525 (97.6)	96.05, 99.10	-	<0.001	-	-	-	-	-	-	-
Both	*	0, 0.58	*	0, 0.45	-	<0.001	-	-	-	-	-	-	-
<i>Which partner did any of the acts^b</i>													
Current parent	217 (31.7)	27.87, 35.54	222 (40.1)	35.29, 44.89	-	0.007	-	-	-	-	-	-	-
Most recent partner	155 (23.2)	19.60, 26.98	75 (13.9)	10.78, 17.06	-	0.0002	-	-	-	-	-	-	-
Previous partner	363 (51.6)	47.36, 55.81	269 (50.8)	45.76, 55.90	-	0.82	-	-	-	-	-	-	-
<i>Sub-categories^c:</i>													
Insulted or made to feel bad about self	580 (40.4)	37.37, 43.37	457 (34.1)	31.09, 37.02	134 (10.2)	0.004	8.37, 12.11	174 (13.0)	11.12, 14.94	0.04	0.04	0.04	0.04
Once	33 (2.6)	1.54, 3.70	40 (2.8)	1.83, 3.74	22 (2.1)	<0.001	1.06, 3.13	35 (2.8)	1.82, 3.88	0.26	0.26	0.26	0.26
Few times	285 (20.1)	17.75, 22.56	283 (21.6)	19.17, 24.05	77 (5.5)	<0.001	4.19, 6.89	95 (7.0)	5.50, 8.45	0.26	0.26	0.26	0.26
Many times	251 (16.9)	14.88, 18.90	116 (8.5)	6.90, 10.17	33 (2.5)	<0.001	1.56, 3.45	43 (3.1)	2.16, 4.15	0.92	0.92	0.92	0.92
Humiliated in front of other people	430 (29.7)	27.12, 23.32	269 (19.8)	17.47, 22.07	70 (5.2)	<0.001	3.94, 6.55	72 (5.3)	3.98, 6.71	0.92	0.92	0.92	0.92
Once	40 (3.0)	1.99, 3.96	51 (3.8)	2.71, 4.93	14 (1.0)	<0.001	0.49, 1.61	16 (1.3)	0.64, 2.03	0.91	0.91	0.91	0.91
Few times	237 (16.4)	14.32, 18.55	154 (11.3)	9.48, 13.09	45 (3.4)	<0.001	2.28, 4.48	44 (3.2)	2.11, 4.21	0.91	0.91	0.91	0.91
Many times	142 (9.6)	7.99, 11.12	54 (4.1)	2.92, 5.21	10 (0.7)	<0.001	0.26, 1.25	11 (0.8)	0.30, 1.40	0.11	0.11	0.11	0.11
Did things that made respondent feel scared or intimidated?	329 (22.6)	20.29, 24.95	78 (5.9)	4.75, 7.40	33 (2.5)	<0.001	1.59, 3.42	19 (1.5)	0.75, 2.27	0.11	0.11	0.11	0.11
Once	30 (2.1)	1.35, 2.97	19 (1.6)	0.72, 2.42	*	<0.001	0, 0.46	7 (0.7)	0.08, 1.25	0.01	0.01	0.01	0.01
Few times	157 (10.8)	9.05, 12.52	35 (2.5)	1.58, 3.50	18 (1.3)	<0.001	0.67, 2.02	8 (0.5)	0.15, 0.82	0.01	0.01	0.01	0.01
Many times	137 (9.3)	7.77, 10.89	20 (1.6)	0.80, 2.34	11 (0.9)	<0.001	0.33, 1.54	*	0, 0.74	0.01	0.01	0.01	0.01
Threatened to harm respondent or someone they care about	213 (14.6)	12.75, 16.50	75 (5.5)	4.26, 6.76	14 (1.1)	<0.001	0.51, 1.71	17 (1.3)	0.62, 1.90	0.71	0.71	0.71	0.71
Once	34 (2.6)	1.56, 3.57	21 (1.5)	0.87, 2.16	*	<0.001	0, 0.51	7 (0.5)	0.11, 0.85	0.57	0.57	0.57	0.57
Few times	89 (5.9)	4.68, 7.19	34 (2.5)	1.60, 3.48	6 (0.6)	<0.001	0.10, 1.06	5 (0.4)	0.03, 0.70	0.57	0.57	0.57	0.57
Many times	89 (5.8)	4.59, 7.06	19 (1.4)	0.75, 2.03	5 (0.3)	<0.001	0.03, 0.55	5 (0.4)	0.03, 0.81	0.57	0.57	0.57	0.57
Destroyed things	193 (13.0)	11.16, 14.93	119 (9.3)	7.40, 11.13	15 (1.2)	0.0001	0.55, 1.90	24 (2.0)	1.09, 2.90	0.17	0.17	0.17	0.17
Once	31 (2.2)	1.41, 3.20	34 (2.7)	1.74, 3.71	6 (0.4)	0.0001	0.06, 0.75	9 (0.7)	0.20, 1.25	0.62	0.62	0.62	0.62
Few times	88 (6.0)	4.68, 7.32	59 (4.8)	3.35, 6.21	5 (0.5)	0.0001	0.03, 1.02	9 (0.8)	0.20, 1.37	0.62	0.62	0.62	0.62
Many times	73 (4.8)	3.63, 5.92	24 (1.6)	0.94, 2.33	*	0.0001	0, 0.59	5 (0.4)	0.05, 0.70	0.62	0.62	0.62	0.62

Notes:
a: Percentages are calculated for ever-partnered sub-sample (n=1,414 women, and n=1,332 men)
b: Percentages are calculated for those with an experience of physical IPV and/or sexual IPV (n=450 for women, n=389 for men), or psychological IPV (n=686 women, n=534 men)
c: Weighted Percentages and 95% Confidence intervals are presented.
d: For the sake of privacy, cells with fewer than 5 respondents were suppressed and shown as *.
IPV=Intimate partner violence

and/or sexual IPV in their lifetime, 27% of women compared with 13% of men reported that these experiences affected their physical health ($p < 0.001$). Similarly, 61.7% of women compared with 40.4% of men reported that their IPV experiences affected their mental health ($p < 0.001$). Overall, 33.9% of women compared with 18.7% of men reported that they had sought help from services following IPV experience ($p < 0.001$).

Discussion

This study provides novel data on the prevalence of interpersonal violence by non-partners and partners experienced by both men and women from a New Zealand population-based survey. This is the second specialist population-based study providing estimates of the prevalence of violence against women in New Zealand²⁶ and the first providing estimates of the prevalence of violence against men. The comprehensive

assessment of the relationship between the victim and person who perpetrated the violence, the gender of those who used and who experienced violence, and the types, frequencies and severity of violence encountered provides important guidance about the gendered nature of violence. Findings suggest where prevention initiatives may be most effectively directed and highlight the extent to which services to support recovery from violence exposure may be necessary within the population.

Overall, we found substantially lower rates of NPV-PV experience among women (11.9%) compared with men (39.9%).⁷ The rates of NPV-PV for NZ women were also substantially lower than the 22% reported by women in an EU-wide study.¹⁶ The rate of NPV-SV reported by women in our study (8.2%) was also lower than rates from other high income countries (12.6%),²⁷ but was higher than the global average (7.2%).¹

Men were the predominant perpetrators of physical and sexual NPV against both genders. Men were more likely to report experience of physical and sexual violence by non-family members, predominantly strangers, school or workmates. Most non-partner physical violence against women was perpetrated by parents and other family members. While women most frequently reported strangers and acquaintances as perpetrators of non-partner sexual violence, parents (11.7%) and relatives/family members (20.7%) still perpetrated a large proportion of this violence experience.¹⁶ In the present study, no man reported sexual violence experience perpetrated by a parent. This is comparable to findings from the USA in which 12.1% of women reported experiencing rape by a family member compared with no men.²⁸

The reported lifetime prevalence of at least one act of IPV-PV and/or IPV-SV was 31% in women and 30% in men. These rates are comparable with rates of IPV reported by population-based studies with women from Sweden (28.0%) and the UK (32.0%)¹⁶ and men from the USA (28.5%).²⁹ However, this study found pronounced gender differences in the frequency of physical IPV experienced. For women, 35% experienced one act and 8% experienced more than five different acts of IPV-PV, compared with 43% of men who reported experiencing one act and less than one percent who experienced more than five acts. The reported lifetime prevalence and frequency of severe acts of physical IPV was also higher among women (e.g. choked or burnt on purpose: 5.3% for women, 0.8% for men), a finding that is consistent with previous studies.^{11,18,29}

Reported lifetime IPV-SV was also higher among women (12.4%) than men (2.1%), a finding that is also consistent with previous studies.^{19,29,30} The gender difference was less pronounced for past 12-month prevalence of IPV-SV (0.9% in women and 0.5% in men), similar to a Swedish study (3.0% of women and 2.3% of men reporting experience of past year IPV-SV).³⁰

Psychological abuse followed the same gendered pattern as physical IPV, with women and men reporting relatively similar lifetime prevalence rates (47.7% and 40.0%, respectively). These rates are higher than those from a USA national study that found 36.4% of women compared with 34.2% of men reported any psychological aggression.¹¹

Table 4: Reported fear, injuries, health concerns, health care needed, and help seeking following physical and/or sexual IPV by gender, the 2019 NZ family violence study.

	Since the age of 15				p-value	
	Women		Men			
	N ^f (%)	95% CIs	N ^f (%)	95% CIs		
Currently feeling afraid of any partner (previous/current)^a						
Never	1301 (92.3)	90.88, 93.66	1296 (98.4)	97.69, 99.15	<0.001	
Yes/sometimes	37 (2.6)	1.79, 3.46	13 (1.0)	0.42, 1.52		
Many times/Most/All the times	15 (1.1)	0.58, 1.69	*	0, 0.29		
In the past/no longer afraid	53 (4.0)	2.95, 4.99	5 (0.5)	0.01, 0.96		
Who are you afraid of currently?^{2a}						
Current/most recent partner	19 (1.3)	0.72, 1.95	7 (0.4)	0.11, 0.74	NA	
Previous partner	32 (2.7)	1.63, 3.71	8 (0.7)	0.18, 1.16		
Both	*	0, 0.29	-	-		
Injuries experienced from physical and/or sexual IPV^{a,b}	181 (40.8)	35.37, 46.15	54 (14.7)	10.77, 18.67	<0.001	
Were you ever hurt badly enough by (any of) your partner(s) that you needed health care^{a,b}	84 (19.0)	15.11, 22.91	14 (3.5)	1.58, 5.38	<0.001	
Would you say that your partner's behaviour towards you has affected your physical health?^{2a,b,c}	A little	122 (16.1)	13.17, 19.06	63 (10.7)	8.15, 13.34	<0.001
	A lot	87 (11.0)	8.63, 13.38	16 (2.5)	1.17, 3.86	
Would you say that your partner's behaviour towards you has affected your mental health?^{2a,b,c}	A little	276 (36.3)	32.55, 39.97	183 (28.9)	24.98, 32.76	<0.001
	A lot	191 (25.4)	22.06, 28.84	67 (11.5)	8.65, 14.39	
Did you seek help from formal agencies/institutions?^{c,d}	Yes	256 (33.9)	30.08, 37.70	116 (18.7)	15.12, 22.31	<0.001

Notes:

a: Ever-partnered sample

b: Among those with an experience of physical IPV and/or sexual IPV (n=450 for women, and n=389 for men)

c: Among those with an experience of physical IPV, sexual IPV or psychological IPV

d: Police, hospital or health center, social services or government agency, legal advice center, court, women's refuge, a local leader, a community organization, a religious leader, a doctor or GP, a mental health service.

f: Weighted Percentages and 95% Confidence intervals are presented.

g: For the sake of privacy, cells with fewer than 5 respondents were suppressed and shown as *.

IPV=Intimate partner violence

Gender differences in the frequency, severity and impact of IPV were also found. A higher proportion of women reported multiple forms of lifetime IPV experience than men, and a higher proportion of women than men reported experiencing injuries, fear and self-reported mental and physical health effects subsequent to the violence. These findings are comparable with international studies that document gender differences in the impact of IPV experience.^{20,31,32} Additionally, a higher proportion of women sought help from service providers than men, a finding consistent with a recent systematic review on help seeking behaviour by IPV survivors by gender.³³

Substantially more men reported lifetime experience of non-partner physical violence (40%) than reported physical IPV (29%). There was a slightly higher proportion of men who reported current (past 12-month) moderate physical and moderate psychological IPV than women, however small numbers preclude assessment of the impact of these experiences. It could be that men who experienced IPV did not regard it as serious enough to leave the relationship. Other research from this study has showed a reduction in the prevalence of 12-month physical and sexual IPV for women over time, which could be the result of women leaving relationships after violence occurs.³⁴

Strengths

This study is the first specialised violence population-based study in New Zealand that included both women and men. It provides a comprehensive profile of lifetime non-partner and lifetime and 12-month prevalence of IPV against women and men.

Limitations

The main limitation to this study is the response rate, which was about 62% for both genders. This may mean that our findings underestimate the true prevalence and severity of violence experience within the population, as people may not report violence in face-to-face surveys and those who are currently experiencing severe IPV may be less likely to respond to surveys. However, many broadly comparable studies have similar or lower response rates (e.g. an overall response rate of 42.1% in the EU-wide survey for violence against women).^{16,18} intimate partner violence (IPV) Additionally, we cannot make inferences about same gender couples from this

study because these were not sufficiently represented in our sample. A further limitation is that these data report counts of behaviour experienced but do not provide information about the context in which violence occurred, for example, whether the violence occurred as an act of self-defence.

Implications

Overall, this study showed that a large proportion of the population has experienced some form of physical and/or sexual violence from either a partner or a non-partner, reinforcing the importance of violence as a major public health problem. Given their dominant rates of perpetrating violence, primary prevention programs for men are urgently needed to address both non-partner and partner violence. These programs will need to include therapeutic resources to support men to address their own experiences of victimisation.

The findings also highlight that there are different patterns and impacts of IPV violence experienced by men and women, and, as such, comparison only based on overall prevalence rates are misleading.^{22,32,33,35} While overall lifetime rates of physical and psychological IPV were comparable for women and men, women experienced these acts with more frequency and severity, and with greater fear, injuries and physical, mental health impacts. Given the ongoing physical and mental health consequences of violent victimisation, all types of violence must be addressed by appropriate policies and supported through well-resourced, sustained prevention programs that address gender and power inequities. Programs to address crisis response and long-term recovery from violence experience also need adequate and sustained funding.³⁶

Acknowledgments

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for use in the WHO Multi-Country Study on Women's Health and Domestic Violence and has been adapted from the version used in Asia and the Pacific by kNowVAWdata Version 12.03). It adheres to the WHO ethical guidelines for the conduct of violence against women research.

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Supporting Information

Additional supporting information may be found in the online version of this article:

Supplementary Figure 1: Proportion of lifetime IPV experienced (none, single and multiple forms) by gender, the 2019 NZ family violence study.