Sexual Relationship Power Equity Is Associated With Consistent Condom Use and Fewer Experiences of Recent Violence Among Women Living With HIV in Canada

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Background: Sexual relationship power (SRP) inequities, including having a controlling partner, have not been widely examined among women living with HIV (WLWH). We measured the prevalence and key outcomes of relationship control among WLWH in Canada.

Methods: Baseline data from WLWH (≥16 years), reporting consensual sex in the last month enrolled in a Canadian community-collaborative cohort study in British Columbia, Ontario, and Quebec, included the relationship control SRP subscale by Pulerwitz (2000). Scale scores were dichotomized into medium/low (score = 1–2.82) vs. high relationship control (score = 2.82–4), and high scores indicate greater SRP equity. Cronbach's alpha assessed scale reliability. Bivariate analyses compared women with high vs. medium/low relationship control. Crude and adjusted multinomial regression examined associations between relationship control and condom use [consistent (ref), inconsistent, or never]; any sexual, physical, and/or emotional violence; and physical and/or sexual violence [never (ref), recent (≤3 months ago), and previous (>3 months ago)].

Results: Overall, 473 sexually active WLWH (33% of cohort), median age = 39 (IQR = 33–46) years, 81% on antiretroviral therapy, and 78% with viral loads <50 copies/mL were included. The subscale demonstrated good reliability (Cronbach's alpha = 0.92). WLWH with high relationship control (80%) were more likely ($P < 0.05$) to be in a relationship, have no children, have greater resilience, and report less sociostructural inequities. In adjusted models, high relationship control was associated with lower odds of inconsistent vs. consistent condom use [adjusted odds ratio (aOR): 0.39 (95% confidence interval: 0.18 to 0.85)], any recent violence [aOR: 0.14 (0.04–0.47)] as well as recent physical and/or sexual [aOR : 0.05 (0.02–0.17)] but not previous violence (vs. never).

Discussion: Prioritizing relationship equity and support for WLWH is critical for addressing violence and promoting positive health outcomes.

Key Words: women, Canada, violence, condom use, sexual relationship power, CHIWOS

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INTRODUCTION

Globally, women aged 15 and older comprise >50% of all people living with HIV (PLWH).[1] Compared with women in the general population, WLWH face greater and overlapping oppressions including poverty, racism, discrimination and violence-based engagement in sex work, and gender discrimination, including transphobia.[2–7]

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Previous research in Canada has found that approximately 64% of WLWH acquire HIV through heterosexual intercourse,[8] and 16% have reported acquiring HIV through partner and nonpartner rape.[9] Thus, although advances in ART have yielded longer life expectancy among many PLHIV,[10,11] WLWH continue to experience multiple overlapping inequities and barriers to HIV care, ART-related outcomes, and achieving overall health and wellness.[12–14] These barriers include high sustained levels of intimate partner violence (IPV) that disproportionately affect WLWH and have been linked to lower ART adherence, reduced ability to achieve viral suppression, and increased mortality.[15,16] Although several studies have demonstrated that controlling behaviors by intimate partners are a major driver of IPV among women,[17–23] within WLWH's relationships little is known about the level of controlling behaviors and associations with violence and other sexual health practices.

Controlling behaviors by male partners within heterosexual cisgender intimate partnerships are often measured using the Sexual Relationship Power (SRP) scale. Guided by Connell's theory of gender and power, the SRP scale contains 2 subscales: the *relationship control* subscale, measuring women's perceptions of their partner's controlling behaviors, and the *decision-making dominance* subscale, measuring the level of inequity in decision-making within the relationship overall and in relation to sex and condom use.[24] Connell's[25] theory postulates that inequities in decision-making, economic earnings, and less physical power affect women's ability to enact personal control in relationships, including condom use negotiation, and increased susceptibility to experiencing IPV. The SRP scale was originally developed and validated among a cohort of 388 women in the United States[24] and has been adapted for use in numerous global contexts.[24,26] Previous research using one or more of the SRP subscales has found associations between SRP inequity and experiences of IPV,[20] inconsistent condom use,[27] and HIV incidence[28] among women of unknown or negative HIV status.[26] Important markers of sociostructural inequity (eg, food insecurity,[29,30] unstable housing,[31] and discrimination[32,33]) and mental health (eg, resilience)[34,35] have also been previously associated with women's agency, sexual behavior, and experiences of violence in the intimate relationships of women. Despite a larger body of literature highlighting the impacts of IPV among WLWH,[15] few studies have examined the prevalence and consequences of controlling behaviors and SRP inequity within the relationships of WLWH.[36]

The overlapping and multiplicative implications of SRP inequity and IPV among WLWH call for greater understandings of WLWH's agency and control, as well as important factors that shape experiences of violence and condom use.[37,38] This study aims to (1) examine the validity and reliability of the relationship control SRP subscale and (2) examine associations between relationship control and experiences of violence (sexual, physical, and emotional) as well as condom use, among a cohort of WLWH in Canada.

METHODS

Study Setting, Design, Recruitment, and Data Collection

This study uses baseline data (2013–2015) from the Canadian HIV Women's Sexual and Reproductive Health Cohort Study (CHIWOS), a national, multisite, longitudinal, community-based research study. Study details have been previously described.[39] In brief, WLWH were hired and trained as Peer Research Associates[40,41] and were key in recruiting and enrolling a total of 1422 self-identified WLWH (≥16 years; cisgender and transgender inclusive) from 3 Canadian provinces: British Columbia (n = 356), Ontario (n = 713), and Quebec (n = 356).[41] After enrollment, participants completed a structured questionnaire administered by Peer Research Associates using FluidSurveys software, consisting of questions relating to sociodemographics, sexual practices, relationship dynamics, other health outcomes, substance use, experiences of violence, and use of HIV clinical and support services. Study visits were conducted in various community settings, including HIV clinics, AIDS service organizations, women's homes, or over the phone/Skype and lasted a mean time of 120 minutes (IQR = 90–150). To maximize validity, items included in the questionnaire were developed and designed and piloted by a national team of experts in women's health and HIV. Participants received a $50 honorarium for their participation.

Inclusion and Exclusion Criteria

Although we measured sex and gender separately, this article focuses on gender. All participants who identified as women (cis-inclusive and trans-inclusive) were included in this analysis. This analysis was restricted to CHIWOS participants who reported having consensual sex in the past month and, as per Pulerwitz et al's[24] guidance, only included participants who responded to ≥two-thirds of the relationship control SRP subscale.

Measures

The primary exposure of interest was relationship control as measured by the 15-item relationship control SRP subscale.[24] Using a 4-point Likert-type scale, participants were asked to respond "strongly agree" (1) to "strongly disagree" (4) to items assessing participants' primary sexual partner's controlling behavior (e.g, "my partner will not let me wear certain things") (items given in Table 1). A modified subscale was created for models examining association with condom use by removing 3 condom use–related items in the subscale (eg, "if I asked my partner[s] to use a condom, s/he would get violent"). When responding to scale items, partners could be of any gender, and although participants could have multiple partners, participants were asked to think about their primary sexual partner. As per scoring guidance,[24] items were summed and divided by the number of nonmissing items to create mean scores. The scale was then trichotomized based on Pulerwitz et al's[24] original scoring with "low" relationship control score = 1–2.430, "medium" score = 2.431–2.820, and

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TABLE 1. CHIWOS Participants' Responses to Items in the Relationship Control SRP Subscale (n = 473)

Item	Response Options, n (%)				Mean (SD)
	Strongly Agree	Agree	Disagree	Strongly Disagree	
1. If I asked my partner(s) to use a condom, s/he would get violent.*	<5	15 (3.2)	139 (29.4)	311 (65.8)	3.62 (0.58)
2. If I asked my partner(s) to use a condom, s/he would get angry.*	6 (1.3)	29 (6.1)	141 (29.8)	292 (61.7)	3.54 (0.67)
3. Most of the time we do what my partner wants to do.	24 (5.1)	97 (20.5)	184 (38.9)	166 (35.1)	3.04 (0.87)
4. My partner would not let me wear certain things.	10 (2.1)	24 (5.1)	200 (42.3)	237 (50.1)	3.41 (0.69)
5. When my partner and I are together I am pretty quiet.	52 (11.0)	89 (18.8)	152 (32.1)	178 (37.6)	2.97 (1.00)
6. My partner has more say than I do about important decisions that affect us.	16 (3.4)	66 (14.0)	177 (37.4)	213 (45.0)	3.24 (0.82)
7. My partner tells me who I can spend time with.	16 (3.4)	48 (10.2)	154 (32.6)	254 (53.7)	3.37 (0.80)
8. If I asked my partner to use a condom, s/he would think I am having sex with other people.*	12 (2.5)	37 (7.8)	163 (34.5)	257 (54.3)	3.42 (0.74)
9. I feel trapped or stuck in our relationship.	15 (3.2)	50 (10.6)	160 (33.8)	236 (49.9)	3.34 (0.79)
10. My partner does what s/he wants, even if I do not want her/him to.	22 (4.7)	73 (15.4)	166 (35.1)	210 (44.4)	3.20 (0.86)
11. I am more committed to our relationship than my partner is.	25 (5.3)	52 (11.0)	178 (37.6)	208 (44.0)	3.23 (0.84)
12. When my partner and I disagree, s/he gets her/his way most of the time.	23 (4.9)	89 (18.8)	170 (35.9)	180 (38.1)	3.10 (0.87)
13. My partner gets more out of our relationship than I do.	18 (3.8)	79 (16.7)	184 (38.9)	174 (36.8)	3.13 (0.82)
14. My partner always wants to know where I am.	40 (8.5)	122 (25.8)	141 (29.8)	164 (4.7)	2.92 (0.97)
15. My partner might be having sex with someone else.	17 (3.6)	63 (13.3)	136 (28.8)	226 (47.8)	3.29 (0.82)
Overall score					3.25 (0.55)

*Items related to condom use not included in relationship control score in the condom use model.
Higher scores indicated greater sexual relationship power equity [range (1) strongly agree and (4) strongly disagree].

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"high" score= 2.821–4, with higher scores indicating greater equity and less controlling behaviors by intimate partners. Because of sample size, for this analysis, low and medium relationship controls were combined and compared with high relationship control.

To examine the validity evidence of the scale, outcomes of interest (condom use and violence) were chosen based on a priori literature demonstrating associations with SRP inequity.[20,27,28,42,43] Male condom use was categorized into consistent condom use (ref), defined as always used a condom 100% of the time in the past 6 months, compared with inconsistent, usually, sometimes, or occasionally used a condom in the past 6 months, or never used a condom in the past 6 months. Violence was defined as any violence [physical, sexual, or emotional (verbal or controlling violence): never (ref) versus previous (history of violence not experienced in the past 3 months) or recent (experienced violence in the past 3 months)]. We also separately examined any physical and/or sexual violence [never (ref), previous, and recent]. Participants were not asked to report who perpetrated experiences of violence, and thus, we do not report experiences of intimate partner-specific violence.[6]

Potential Confounders

Factors that would potentially confound the relationship between the exposure and outcomes of interest were selected based on a priori knowledge. Sociodemographic factors included age [median, quartile 1, quartile 3 (Q1–Q3)], relationship status (separated/divorced/widowed/single vs. married/relationship/common-law), children [ever had a live birth (yes vs. no)], racial and gender discrimination scales (median, Q1–Q3),[44–46] food security (secure vs. insecure),[47] ability to meet monthly housing costs [very difficult vs. other (fairly difficult, a little difficult, or not at all difficult)],[31] and housing stability [stable (own/rent house, apartment, or self-contained room) vs. unstable (self-contained room with no amenities, transition home, halfway house, safe house, couch surfing, outdoor, or in a car)].[48] Participants were also asked whether they were currently (in the past 6 months) engaged in sex work (yes vs. no)[49] or injection drug use (yes vs. no).[50]

Resilience is often a measure of self-reliance, ie, ability to handle difficult situations that have important implications and links with both SRP equity, condom negotiation, and violence.[35,51,52] Participants' resilience was measured by asking participants to select the option [strongly agree (1) to strongly disagree (7)] that best indicates your feelings about 10 statements relating to resilience (range 10–70, with higher scores indicating greater resilience).[53]

Attitudes toward ART prevention benefits have been previously associated with HIV disclosure in our study[54] and thus an important factor in WLWH relationship dynamics, condom use, and experiences of violence. Awareness of ART prevention benefits was measured through self-reported belief that ART makes the risk of HIV transmission a lot lower (vs. a little lower, no difference, a little higher, and a lot higher).

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Food security was measured using 4 items from the Canadian Community Health Survey Household Food Security Food Module to measure sufficient food quantity and dietary diversity (range 0–6, score ≥2 = food insecure, study Cronbach alpha = 0.90).[55]

The everyday discrimination scale measures the frequency (almost every day to never) in which participants experience discrimination due to their race using 8 items related to experiences of racial discrimination (study Cronbach alpha = 0.95) and gender discrimination measured by asking 8 items related to discrimination due to their gender [study Cronbach's alpha for cisgender participants (n = 451) = 0.93, and transgender or intersex (n = 22) = 0.95], higher scores = greater perception of racial or gender discrimination (range 8–48).[57]

Statistical Analyses

Descriptive summaries of item responses to all relationship control subscale items and overall scale mean are presented. To assess the reliability of the relationship control subscale in our sample, an exploratory factor analysis and Cronbach's alpha were calculated.

Sociodemographic, substance use, and markers of inequity differences between CHIWOS participants with high vs. medium/low relationship control (Table 3) and differences between included and excluded participants (see Supplementary Material, Supplemental Digital Content, http://links.lww.com/QAI/B899) were assessed using χ^2 and Fisher exact tests for categorical variables and the Wilcoxon rank-sum test for continuous variables. Unadjusted and adjusted multinomial logistic regression analyses examined the association between the subscale and outcomes previously associated with relationship control, including (1) condom use (using the modified subscale, consistent vs. never; inconsistent vs. never), (2) any violence, and (3) any physical and/or sexual violence (2 and 3 using full subscale, never vs. current; never vs. previous). All potential confounders were included in the adjusted model. Participants who responded do not know or prefer not to answer for any of the variables in the final model were not included. All analyses were conducted using SAS 9.4.

Ethical Statement

All participants gave written or oral (if interview was conducted by phone or Skype) voluntary consent. This study received ethical approval from the Research Ethics Boards of Simon Fraser University, University of British Columbia/Providence Health Care, Women's College Hospital, and McGill University Health Care. Study sites with independent REBs obtained their own approval before commencing enrollment.

RESULTS

Of 1422 women enrolled in CHIWOS, 473 (33.3%) were included in this analysis. Supplementary Table 1 (Supplemental Digital Content, http://links.lww.com/QAI/B899) describes the differences between included and excluded participants. Of the excluded participants (n = 949), 90% were not sexually active, 9% did not complete the sexual health section of the questionnaire, and 1% did not answer the subscale (see Supplementary Material, Supplemental Digital Content, http://links.lww.com/QAI/B899). Overall, 95% of participants identified as cisgender; 14% as lesbian, gay, or bisexual; 85% had a high school or greater education; 60% reported food insecurity; 59% were legally married, in a relationship, or common-law; and 20% reported that it was very difficult to meet monthly housing costs. Nearly a quarter (24%) of WLWH were Indigenous, 27% African, Caribbean, and/or Black (ACB), and 42% white. Most received access to HIV medical care in the last year (93%), 64% had ≥90% ART adherence in the past month, and 78% reported undetectable viral loads (<50 c/mL).

Relationship Control SRP Subscale

Table 1 presents responses to the 15-item relationship control subscale. Across all items, the highest scored item was "If asked to use a condom s/he would get violent," with less than 5% of participants indicating they strongly agree/agree. The mean scores for the item "my partner always wants to know where I am" were the lowest (2.92), with 34.3% of participants stating they agree/strongly agree. The overall mean score for all participants was 3.25.

Relationship Control Subscale Validity and Reliability

We based our subscale scoring on the trichotomized scores of the original sample[24] and found that 80% of WLHIV in our study had high relationship control. The distribution of our sample scores was left-skewed and 25% quartile = 2.88, median = 3.2, and 75% quartile = 3.73 (Fig. 1). Exploratory factor loading patterns found that all items had a factor loading ≥0.50, and the overall study Cronbach's alpha was 0.915 (Table 2).

Bivariate Associations Between Relationship Control and Sociodemographic Characteristics

Table 3 shows the bivariate differences between participants with high (80%) vs. medium/low (20%) relationship control. WLWH with high relationship control were more likely (all $P < 0.05$) to have higher personal incomes; to be legally married, common-law, or in a relationship; to be food secure; and to have greater resilience, while less likely to report meeting monthly housing costs was very difficult, to have children, to have used injection drugs in the past 3 months, and to have experienced greater gender and racial discrimination.

Associations Between Relationship Control and Condom Use and Experiences of Violence

Overall, in the past 6 months, consistent condom use was reported by 38% of participants and 16% reported inconsistent condom use. Over a quarter (26%) of WLWH reported recent violence of any kind and 10% reported recent physical and/or sexual violence. In bivariate comparisons

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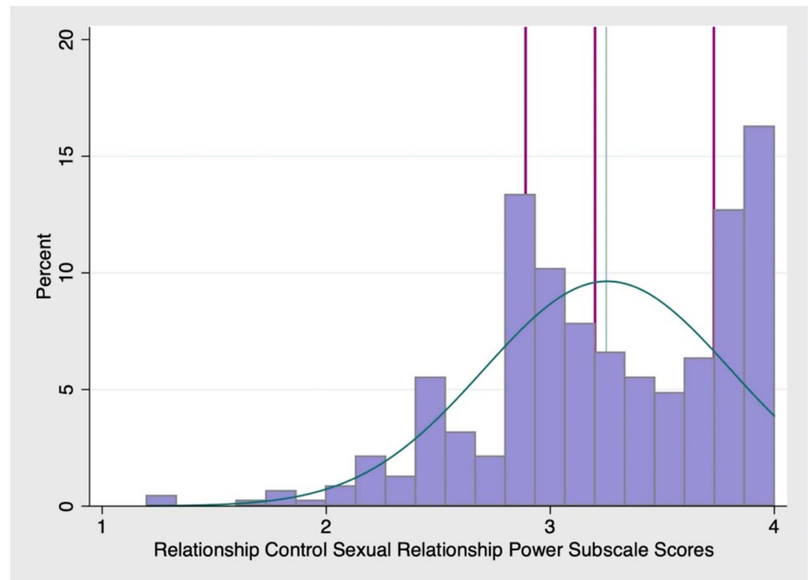

FIGURE 1. Distribution of the relationship control sub-scale scores among sexually active women living with HIV enrolled in the CHIWOS study (n = 473), with higher scores indicating greater relationship control. Median = 3.2, 25% quartile = 2.89, 75% quartile = 3.73 (darker lines) (lighter line), and mean = 3.25. full color online

(Table 3), women with high relationship control were less likely (all $P < 0.001$) to report recent experiences of all violence variables and inconsistent condom use.

Table 4 presents the crude and adjusted models examining associations between relationship control and (1) condom use, (2) any violence, and (3) physical and/or sexual violence. After adjusting for potential confounders, women with high relationship control had lower odds of inconsistent condom use [aOR = 0.39, 95% confidence interval (CI) = 0.18 to 0.85], but not never condom use (aOR = 0.56, 95% CI = 0.31 to 1.04) (vs. consistent condom use), and lower odds of any recent but not previous violence (aOR = 0.14, 95% CI = 0.04 to 0.47), as well as recent but not previous physical and/or sexual violence (aOR = 0.05, 95% CI = 0.02 to 0.17) (all vs. never).

TABLE 2. Exploratory Factor Analysis Pattern of the SRPS Relationship Control Subscale Among CHIWOS Participants (n = 473)

		Factor 1
1	If I asked my partner(s) to use a condom, s/he would get violent.	0.6339
2	If I asked my partner(s) to use a condom, s/he would get angry.	0.6841
3	Most of the time, we do what my partner wants to do.	0.5900
4	My partner would not let me wear certain things.	0.6794
5	When my partner and I are together, I am pretty quiet.	0.5145
6	My partner has more say than I do about important decisions that affect us.	0.6802
7	My partner tells me who I can spend time with.	0.7011
8	If I asked my partner to use a condom, s/he would think I am having sex with other people.	0.6938
9	I feel trapped or stuck in our relationship.	0.7871
10	My partner does what s/he wants, even if I do not want her/him to.	0.6848
11	I am more committed to our relationship than my partner is.	0.7391
12	When my partner and I disagree, s/he get her/his way most of the time.	0.7569
13	My partner gets more out of our relationship than I do.	0.7100
14	My partner always wants to know where I am.	0.5926
15	My partner might be having sex with someone else.	0.5072
	Cronbach's alpha = 0.915	

DISCUSSION

Our findings demonstrate that among a cohort of sexually active WLWH in Canada, 80% had high SRP equity in their primary relationship, based on previously defined relationship control subscale scores.[24] WLWH with greater SRP equity were less likely to report sociostructural inequities, including food insecurity, difficulty meeting monthly housing costs, and gender discrimination. Although no significant difference in SRP equity was noted between WLWH of differing ethnicities, women who experienced less racial discrimination had greater SRP equity. The relationship control subscale, a common measure of SRP equity, had good reliability and high relationship control was independently associated with consistent condom use and lower odds of recent violence. These findings signal that relationship control is a protective factor as well as a social and health resource among WLWH, aligning with calls to explore strength-based and empowering factors in intersectional stigma research.[58]

The SRP scale has been previously used in numerous settings primarily among women of unknown or negative HIV status.[59] Most sexually active WLWH in our study had high relationship control with a median score of 3.2, which was higher than many other studies, including 48% higher than women in the original study,[24] over 1 point higher than women who use methamphetamine not living with HIV in the United States,[60] 0.6 points higher than WLWH in rural Uganda,[18] and 0.3 points higher than young African American women.[61] As

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TABLE 3. Bivariate Differences Between CHIWOS Participants With Low/Medium vs. High Relationship Control (n = 473)

	Low/Medium (n = 95)		High (n = 378)		
	n/Median	%/Q1–Q3	n/Median	%/Q1–Q3	P
Outcomes of interest					
Condom use in the past 6 mo					
Consistent	24	25	155	41	0.005
Inconsistent	23	24	52	14	
Never	42	44	148	39	
History of violence of an adult					
Previously but not recently	33	35	229	61	<0.001
Recently (past 3 mo)	53	56	70	19	
Never	5	5	61	16	
DK/PNTA*	4	4	18	5	
Physical and/or sexual violence					<0.001
Previous but not recently	49	52	234	62	
Recently (past 3 mo)	31	33	17	4	
Never	11	12	109	29	
DK/PNTA	4	4	18	5	
Sociodemographic factors					
Participant age at baseline (yr)	39	34–45	39	32–46	0.688
Sexual orientation					0.326
Heterosexual	78	82	325	86	
Lesbian, bisexual, queer, or other sexual minority	17	18	51	13	
DK/PNTA	0	0	2	1	
Gender identity					
Cisgender	88	93	360	95	0.309
Transgender or other gender identity	7	7	18	5	
Province of interview					
British Columbia	31	33	104	28	0.529
Ontario	37	39	168	44	
Quebec	27	28	106	28	
Education					
Lower than high school	20	21	50	13	0.075
High school or higher	75	79	325	86	
DK/PNTA	3	1	3	1	
Main source of income					
Paid job	13	14	106	28	0.003
Other sources of income	82	86	267	71	
DK/PNTA	0	0	5	1	
Ethnicity					
Indigenous	24	25	88	23	0.284
African, Caribbean, Black	32	34	96	25	
White	33	35	168	44	
Other	6	6	26	7	
Relationship status					
Legally married/common-law/in a relationship	43	45	233	62	0.007
Single/separated/divorced/widowed/other	51	54	145	38	
DK/PNTA	1	1	0	0	
Housing stability					0.332
Stable	83	87	344	91	
Unstable	12	13	34	9	
Meeting monthly housing costs					
Very difficult	29	31	65	17	0.003
Other (fairly difficult, a little difficult, or not at all difficult)	59	62	300	79	
DK/PNTA	7	7	13	3	

(*continued on next page*)

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TABLE 3. (*Continued*) Bivariate Differences Between CHIWOS Participants With Low/Medium vs. High Relationship Control (n = 473)

	Low/Medium (n = 95)		High (n = 378)		
	n/Median	%/Q1–Q3	n/Median	%/Q1–Q3	*P*
Food security					
Food secure	21	22	166	44	<0.001
Food insecure	73	77	209	55	
DK/PNTA	1	1	3	1	
Have children (ever had a live birth)					
No	14	15	110	29	0.010
Yes	75	79	251	66	
Not applicable (transgender women)	6	6	17	4	
HIV-related factors					
Median years living with HIV, IQR	9	6–15	10	6–16	0.47
ART use ever					0.290
Yes	87	92	328	87	
No	8	8	49	13	
DK/PNTA	0	0	1	0	
How do you think taking ARVs changes your risk of transmitting HIV					
A lot lower	61	64	281	74	0.192
A little lower/no difference/a little higher/a lot higher	24	25	75	20	
DK/PNTA	10	11	22	6	
Adherence ≥90% in the past mo					0.526
No	18	19	61	16	
Yes	58	61	246	65	
Not currently on ART	19	20	71	19	
Most recent viral load					0.520
Undetectable (<50 c/mL)	78	82	289	76	
Detectable (≥50 c/mL)	12	13	58	15	
DK/PNTA	3	3	15	4	
Never received VL results/never accessed HIV medical care	2	2	16	4	
Substance use, mental health, and sexual practice-related factors					
Current IDU					
No recent IDU	76	80	341	90	0.003
Recent IDU (past 3 mo)	19	20	33	9	
DK/PNTA	0	0	4	1	
Recent sex work (in the past 6 mo)					
No	79	83	335	89	0.255
Yes	13	14	36	10	
DK/PNTA	3	3	7	2	
Resilience scale	62	57–67	65	60–69	<0.001
Everyday Discrimination Scale (EDD)–sexism	24	12–31	16	10–26	<0.001
Everyday Discrimination Scale (EDD)–racism	21	8–35	14	8–25	0.001

*DK/PNTA was not used in the calculation of the *P* values.

ART, antiretroviral therapy; DK, do not know; EDD, Everyday Discrimination Scale; IDU, injection drug use; IQR, interquartile range; mo, month; PNTA, prefer not to answer; Q1, Q3, quartile 1, quartile 2.

gender dynamics are inherently dynamic and multidimensional factors,[62] differences in SRP scale scores across studies are likely influenced by context, time, and social settings. Although previous research has shown that CHIWOS participants experience greater sociostructural inequities than women in the general population,[7] our participants may have greater social safety, support, and agency than some of the women in previous studies exploring SRP equity among women in rural contexts in the Global South, WLWH who use drugs, and young racialized women in the United States. Future research is needed to understand and compare SRP equity within and across diverse contexts and populations.

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TABLE 4. Unadjusted and Adjusted Associations Between Relationship Control and (1) Condom Use (n = 382),* (2) Any Violence (n = 371),* and (3) Any Physical and/or Sexual Violence (n = 371)* Among Women Living With HIV in Canada

		Unadjusted Odds Ratio (95% CI)		Adjusted Odds Ratio (95% CI)	
Model 1–condom use* (n = 382)	Categories	Inconsistent vs. consistent	Never vs. consistent	Inconsistent vs. consistent	Never vs. consistent
Relationship control subscale	Low/medium (≤2.82)	Ref		Ref	Ref
	High (>2.82)	0.53 (0.27 to 1.1)	0.63 (0.36 to 1.06)	0.39 (0.18 to 0.85)	0.56 (0.31 to 1.04)
Model 2–any violence (n = 371)		Previous vs. never	Recent vs. never	Previous vs. never	Recent vs. never
Relationship control subscale	Low/medium (≤2.82)	Ref	Ref	Ref	Ref
	High (>2.82)	0.73 (0.24 to 2.22)	0.09 (0.03 to 0.28)	1.03 (0.19 to 1.0)	0.14 (0.04 to 0.47)
Model 3–any sexual and/or physical violence (n = 371)		Previous vs. never	Recent vs. never	Previous vs. never	Recent vs. never
Relationship control subscale	Low/medium (≤2.82)	Ref	Ref	Ref	Ref
	High (>2.82)	0.65 (0.27 to 1.6)	0.05 (0.02 to 0.17)	0.65 (0.27 to 1.6)	0.05 (0.02 to 0.17)

Each model adjusted for current injection drug use, current sex work, food security, having children, housing stability, meeting monthly housing costs, relationship status, resilience, everyday racial and gender discrimination scale, age, and perceived ART prevention benefits.

*Participants were removed for having DK/PNTA/or not applicable responses to the items in the model.

Our study found that WLWH with greater SRP equities were more likely to use condoms consistently and experience lower odds of recent violence. These results are in line with previous research, supporting strong validity evidence for the use of the relationship control SRP subscale among WLWH in Canada. Moreover, findings highlight the gendered nature of male condom negotiation[59,63] and important implications for criminal liability due to HIV nondisclosure legislation in Canada. For many WLWH, HIV disclosure may be met with fear of violence, rejection, and societal stigma.[64,65] Under current Canadian case law, PLWH must disclose their HIV status to sexual partners or use a condom and be on ART with a low viral load. This law persists despite the strong available scientific evidence that with an undetectable viral load HIV is untransmissible to sexual partners (U = U).[66] Results from this study support previous qualitative research among WLWH highlighting gendered power imbalances in negotiating male controlled condoms and the structural violence of current Canadian legislation.[67] Canadian laws regarding HIV disclosure require women to have a certain level of agency to disclose one's status and negotiate condom use, which has disproportionate consequences for WLWH in controlling relationships.[67]

Bivariate results found that women with greater food security, the ability to meet monthly housing costs, who had no children, and who experienced less racial and gender discrimination reported higher levels of relationship control. These findings underscore how WLWH who face multiple sociostructural inequities and barriers to leaving abusive and controlling partners (eg, children) may be more susceptible to relationship dependency with controlling and sometimes violent partners. Thus, addressing structural-level factors, such as poverty and harmful gender norms, are needed to support WLWH experiencing SRP inequity and potential IPV.[68] Previous research with sex workers has shown asset-based community mobilization programs can be a means to support women facing co-occurring violence and sociostructural inequities.[69] Future research is needed to explore how asset-based programming, services, and supports can help to support higher relationship equity among WLWH and eliminate IPV.[70–76]

Abuse, control, and violence are rarely present or obvious at the beginning of relationships, and thus, efforts are needed at early stages in relationships to help couples address and improve gender relations and support WLWH in identifying cycles of abuse.[18,74,75] The complexities of intimacy, safer sex practices, sexual decision-making, and contraception preferences should be acknowledged and discussed in clinical and peer-based settings to support WLWH in HIV disclosure, heightened pleasure, and happier, healthier intimate relationships.[76] Moreover, to help reduce HIV stigma and fear of HIV acquisition, efforts are needed to support conversations about U = U within relationships affected by HIV.

Given the potential harms that abusive and controlling partners can produce because of HIV criminalization laws, the prosecutorial guidelines for HIV nondisclosure should be revised to reflect the current science behind HIV transmission, and HIV care providers should ensure that support for HIV disclosure documentation is offered and provided, if desired.[67] Such services and programming should take a trauma-aware and violence-aware care approach to provide safer spaces in which WLWH can talk about and share experiences of violence and control by dismantling and attempting to equalize historical clinician–client power imbalances.[77]

Limitations

The quantitative and cross-sectional nature of this study, and the fact that these data were collected before

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mainstream U = U messaging, limits the ability to examine complex or time-dependent examinations into WLWH's sexual decision-making in a context where HIV nondisclosure can be criminalized. Future research needs to examine factors influencing relationship control using time-dependent data. These results highlight that even after adjusting for perceived prevention benefits of ART, WLWH with less control in their intimate relationships may have reduced agency to negotiate condom use. Thus, although some women in our study may use U = U as an effective option for safer sex, some women may wish to use condoms but are unable because of fear of violence from controlling partners. Future qualitative research should unpack the mechanism between which SRP equity affects sexual decision-making, condom use, and violence experienced by WLWH. Many of the women in CHIWOS (73%) were excluded as the SRP scale was only asked to sexually active participants, and results indicated a significant difference in several factors between those included and excluded from this analysis, likely limiting the generalizable to all WLWH in Canada. Several strategies were used by our study team to recruit underserved WLWH, including racialized WLWH, resulting in 33% ACB and 19% Indigenous women in our cohort.[41,78] Despite these efforts, the CHIWOS cohort was not a random sample, and white women were still over-enrolled, highlighting the need for additional efforts to create inclusive environments for WLWH who have been historically underserved and overexploited in research and medical settings.[41] Moreover, although participants in non-heterosexual relationships could have responded to the scale, the SRP scale has been used in the literature in heavily heteronormative settings, and thus, the extent at which the SRP scale captures power dynamics within non-heterosexual relationships is not well established.[26,79] Similarly, as participants were asked to respond to items thinking about their "primary partner," the SRP scale is limited in its ability to capture power dynamics in relationships outside of primary partnerships, which may have dramatically different power relations. As such, additional research is required to further explore relationship power outside of heteronormative settings. Finally, as condom use, experiences of violence, and responses to the relationship control subscale were self-reported, results from this study may be limited by social desirability bias.

CONCLUSIONS

Our results highlight that most sexually active CHIWOS participants in primary partnerships reported high levels of control within their relationships, which was associated with consistent condom use and lower odds of recent violence. We found very high reliability of the relationship control SRP subscale within a national cohort of WLWH, supporting the use of this subscale among sexually active WLWH in primary partnerships in Canada. To address violence and promote positive sexual health outcomes among WLWH, there is a critical need for programs that prioritize building relationship equity.

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