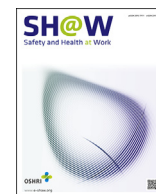


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Original Article

Domestic Violence in the Canadian Workplace: Are Coworkers Aware?

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ABSTRACT

Background: Domestic violence (DV) is associated with serious consequences for victims, children, and families, and even national economies. An emerging literature demonstrates that DV also has a negative impact on workers and workplaces. Less is known about the extent to which people are aware of coworkers' experiences of DV.

Methods: Using data from a pan-Canadian sample of 8,429 men and women, we examine: (1) awareness of coworker DV victimization and perpetration; (2) the warning signs of DV victimization and perpetration recognized by workers; (3) whether DV victims are more likely than nonvictims to recognize DV and its warning signs in the workplace; and (4) the impacts of DV that workers perceive on victims'/perpetrators' ability to work.

Results: Nearly 40% of participants believed they had recognized a DV victim and/or perpetrator in the workplace and many reported recognizing more than one warning sign. DV victims were significantly more likely to report recognizing victims and perpetrators in the workplace, and recognized more DV warning signs. Among participants who believed they knew a coworker who had experienced DV, 49.5% thought the DV had affected their coworker's ability to work. For those who knew a coworker perpetrating DV, 37.9% thought their coworker's ability to work was affected by the abusive behavior.

Conclusion: Our findings have implications for a coordinated workplace response to DV. Further research is urgently needed to examine how best to address DV in the workplace and improve outcomes for victims, perpetrators, and their coworkers.

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1. Introduction

“Beyond the obvious negative impacts on the worker experiencing abuse (e.g., decreases in physical/mental health, work performance, etc.), the workplace as a whole may be affected. Coworkers may be distressed by witnessing the effects of the abuse, or feel unsafe around abusive partners. Managers may not know how to effectively accommodate a worker experiencing abuse or make the workplace a safer space.”

(Survey participant)

Domestic violence (DV; also known as *partner abuse*, *intimate partner violence*, etc.) has significant and wide-ranging impacts [1,2]. Clearly, victims suffer the most; in addition to the fear, humiliation, and pain of the abuse, experiencing DV is associated

with mental and physical health problems that can last for years, even after the abusive relationship ends [3,4]. Research in the last few decades has begun to call attention to other far-reaching consequences. For example, children who are exposed to DV experience similar psychological problems associated with other forms of child maltreatment [5,6], and DV costs national economies (e.g., Canada) billions of dollars per year [7–9]. An emerging literature is also establishing DV as a problem with implications for the workplace, including, for example, impacts on victims' and perpetrators' work performance [10–12], but also impacts on victims' coworkers [13]. The current research contributes to this literature by examining coworkers' awareness of DV in the workplace.

DV impacts the workplace in several ways. When it occurs in the home, its impacts can be felt at work—for example, both victims

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and perpetrators experience absenteeism, concentration difficulties, and poorer work performance as direct consequences of DV [10,11,14]. DV itself enters the workplace when perpetrators harass their partner at work remotely (e.g., via email and texting) or present at the workplace to harass, stalk, intimidate, or even harm the victim [11,15]. Several studies have found that perpetrators also use their work time and resources to carry out these types of DV [14,16]. When DV enters the workplace, it is not uncommon for coworkers to become involved. Many DV victims report that their coworkers are harassed, lied to, and even harmed or threatened by the perpetrator [13,17–19]. Coworkers can also be affected without knowing why, for example by unexplained victim and perpetrator absenteeism and schedule or workload changes, or their awareness of the DV may cause them to feel stress and concern about the situation [19].

More research in general is needed to examine the impacts of DV on the coworkers of victims and perpetrators; however, there is also a specific gap when it comes to understanding how aware people are of their coworkers' DV experiences. Such awareness may have implications for how people respond when inconvenienced by the DV in some way (e.g., by absenteeism), but also on perceptions of workplace safety and culture as well as the design and implementation of DV awareness and response campaigns. Large-scale surveys on DV in the workplace conducted in Australia [20], New Zealand [21], and the UK [18], report rates of awareness of coworker DV victimization from 16% to 20%. However, by constraining responses so that DV victims could not also report being aware of others' DV experiences, these surveys are likely to underestimate awareness rates. Underestimation is a particular issue if DV victims are more likely than nonvictims to be aware of other victims' experiences, a question that, to our knowledge, has not been addressed in the literature. Nevertheless, a survey (without the above limitation) conducted among white collar workers in Turkey found that 18% of participants had witnessed or heard that a coworker was a victim of DV [22]. Another set of studies surveying employees and CEOs from Fortune 1,500 companies in the USA found considerably higher rates of workplace awareness of DV victimization—58% for CEOs and 41% for employees [23]. Finally, evidence from ongoing official reviews of DV-related deaths suggests that in such extreme cases, coworkers (as well as friends, family etc.) are often aware of the DV but do not understand the severity of the situation or know how to intervene [24–27].

Less research has been done to understand awareness of DV perpetration in the workplace. We know of two relevant studies, both of which surveyed male perpetrators involved in batterer intervention programs for the abuse of a female partner [14,16]. The surveys found that it was fairly common for the supervisors of perpetrators to be aware of the DV (83%) [14] or of DV-related arrests (73%) or protection orders (55%) [16]. To our knowledge, Schmidt and Barnett's [14] finding that 65% of perpetrators said a coworker was aware of the DV is the only estimate of its kind. Given that the sample was made up of men who were already in batterer intervention programs, however, these rates may overestimate general workplace awareness of DV perpetration. A startling finding of both studies was how frequently supervisors in particular did not say or do anything in response to the DV, and how many responses by supervisors and coworkers were highly inappropriate (e.g., blaming the victim, joking about the DV, or colluding with the perpetrator).

Workers may come to know of others' DV experiences in several ways—they may witness it, hear about it from either the victim, perpetrator, or from someone else at work, or they may piece it together from observing warning signs. There are many online resource guides for the recognition of signs of DV victimization and perpetration both generally, and for the workplace in particular

(e.g., [28–31]), and interventions to improve recognition of DV, at least among healthcare professionals, can be effective [32]. Nevertheless, evidence to date suggests that most workplaces do not provide management or employees with adequate training in DV [33], and some evidence finds that supervisors report specific difficulty recognizing signs of DV in the workplace [34]. We are aware of only one study reporting rates of recognition of DV (victimization) warning signs in the workplace—the most commonly recognized warning signs were depression, changes in work performance and signs of anxiety and fear [22].

Overall, many issues related to awareness of DV in the workplace remain understudied. First, more research is needed to clarify the extent to which workers are aware of DV victimization and perpetration in general, and in particular, the warning signs and impacts of DV in the workplace. Second, whether DV victims are more likely to recognize others' experiences of DV is unclear. Some psychological research shows an in-group advantage in some kinds of person perception [e.g., 35], but, to our knowledge, this phenomenon has not been studied with respect to DV victims recognizing others' DV experiences. Finally, research on the impacts of DV in the workplace and the supports that workers receive—from the perspectives of coworkers (as opposed to victims or perpetrators)—is lacking. To address these gaps, we used data from a large-scale pan-Canadian survey to examine the following questions: (1) How common is it for workers to report being aware of a coworker who is a DV victim or perpetrator? (2) What warning signs of DV victimization and perpetration do workers recognize? (3) Are victims of DV more likely than nonvictims to recognize DV and its warning signs in the workplace? (4) When aware: (a) what impacts of DV do workers perceive on the victims'/perpetrators' ability to work; and (b) do they know when victims/perpetrators receive DV-related support at work?

2. Materials and methods

2.1. Overview

On December 6, 2013, the authors, in collaboration with the Canadian Labour Congress¹ (CLC), launched the first Canadian survey on the impact of DV in the workplace. The survey, based on a questionnaire used in Australia [20], was available online in both official languages (English and French) and anyone, aged 15 years and older, regardless of DV experience, was eligible to participate.

In addition to launch-specific activities including significant national media attention, recruitment was conducted by the CLC and its affiliates via posters and bookmarks handed out at events, and provided to affiliates for national, regional and local distribution. Recruitment emails were also circulated to and through union officials for distribution through member lists. Given the broad recruitment strategy, we have no way of knowing the number of individuals in the various work sectors who were exposed to information about the study. All materials used the slogan “Can work be safe when home isn't?” and provided the web URL and QR code to access the survey. In appreciation for their time, participants had the option of entering a draw for a tablet computer; identifying information for draw entries was kept separate from survey responses. The survey was available online for 6 months. Full details on the development of the survey and an overview of its main findings are available elsewhere [19]. At the beginning of the survey

¹ The CLC (www.canadianlabour.ca) brings together Canada's 34 national and 33 international unions along with 98 provincial and territorial federations of labour, 111 district labour councils and 12 federations of labour. In total, the organizations represent 3.3 million Canadian workers across all sectors.

we defined domestic violence for participants as: “any form of physical, sexual, emotional or psychological abuse, including financial control, stalking and harassment. It occurs between opposite- or same-sex intimate partners, who may or may not be married, common law, or living together. It can also continue to happen after a relationship has ended.” Participants who were not currently employed were instructed to “think about your last job as you answer work-related questions in this survey.”

2.2. Measures

2.2.1. Demographic characteristics

Participants responded to various demographic questions including their: gender, age, place of birth, ethnicity, and work-related variables (employment status, union status, sector, hours, and size of workplace). Work sector was measured using categories from the North American Industry Classification System for work sector [36].

2.2.2. DV status

Participants responded “yes” or “no” to three main questions regarding their personal DV experience: (1) whether they were currently experiencing DV; (2) (if “no” to current DV) whether they had experienced DV in the past 12 months (i.e., recent, but not current, DV); and (3) whether they had experienced DV more than 12 months ago. Those responding “yes” to at least one DV status question were coded as having lifetime DV experience—this categorical variable was used to examine differences between those who were and were not victims of DV at any point in their life.

2.2.3. Perceptions of others’ DV victimization and its warning signs

Participants responded “yes,” “no,” or “don’t know/not sure” to the statement “I have at least one co-worker who I believe is experiencing, or has previously experienced, domestic violence.” Next, they responded to the following question by checking off applicable options from a list: “Experts have found there are a number of warning signs that someone may be experiencing domestic violence. Have you recognized warning signs that a co-worker, past or present, may be experiencing domestic violence?” Seventeen warning signs, as used in DV-specific educational materials and programs [e.g., 29], were listed, for example: “Downplaying or denying harassment or injuries,” “The appearance of gifts or flowers after an argument between the couple,” and “Nervous in presence of partner” (for the complete list, see Table 1).

2.2.4. Perceptions of others’ DV perpetration and its warning signs

Participants responded “yes,” “no,” or “don’t know/not sure” to the statement “I have at least one co-worker who I believe is being abusive, or has previously been abusive, toward his/her partner.” Next, they responded to the following question by checking off warning signs from a list: “Experts have found there are a number of warning signs that someone may be abusive. Have you recognized any of the following warning signs that a co-worker, past or present, may be using abusive behaviour?” Among the 11 warning signs of abusive behavior listed, examples included “Acts as if he/she owns the victim” and “Contacts their partner while at work to say something that might scare or intimidate them” (for the complete list, see Table 2) [29].

2.2.5. Workplace impacts of DV victimization and perpetration

Participants who believed they had known a coworker experiencing DV were further asked to respond “yes,” “no,” or “don’t know/not sure” to the question “Has your co-worker’s experience of domestic violence affected their ability to work?” and to indicate the ways in which their coworkers’ work was affected from the

Table 1

Warning signs ever observed among workers reporting a current coworker who is/ was victimized ($N = 2,984$)

Warning sign (victimization)	<i>n</i> (%)
Signs of anxiety and fear	1,813 (60.8)
Missing work or lateness for work	1,504 (50.4)
Emotional upset or flatness, tearfulness, depression, aggression, anger, and/or suicidal thoughts	1,359 (45.5)
Change in job performance: poor concentration, mistakes, slowness, inconsistent work quality	1,329 (44.5)
Sensitivity about home life or hints of trouble at home—may mention partner’s bad moods, anger, temper, and alcohol or drug abuse	1,302 (43.6)
Isolation; unusually quiet and keeping away from others	1,173 (39.3)
Downplaying or denying harassment or injuries	930 (31.2)
Obvious injuries such as bruises, black eyes, broken bones, hearing loss—these are often explained as falls, being clumsy, or accidents	914 (30.6)
An unusual number of phone calls, strong reactions to those calls, and reluctance to talk or respond to phone messages. Insensitive or insulting phone messages left for the coworker experiencing abuse	831 (27.8)
Requests for special treatment, such as leaving early	824 (27.6)
Apologizing or making excuses for the partner’s behavior	823 (27.6)
Fear of job loss	592 (19.8)
Nervous in presence of partner	561 (18.8)
Changes in use of alcohol or drugs	554 (18.6)
Clothing not right for the season, such as long sleeves and turtlenecks in summer or things like wearing sunglasses indoors and unusually heavy makeup	519 (17.4)
Disruptive personal visits to workplace by present or former partner	411 (13.8)
The appearance of gifts or flowers after an argument between the couple	243 (8.1)

following options: distracted (e.g., by stress, abusive phone calls, emails), tired (e.g., due to sleep deprivation from the DV), unwell (anxiety, depression, headache, etc., from the DV), injured (from the DV), other, or “I am not sure how their work performance was affected.” Similarly, those who responded “yes” to having a coworker perpetrating DV were asked to indicate whether or not they believed the abusive behavior affected the coworker’s ability

Table 2

Warning signs ever observed among workers reporting a current coworker who is/ was perpetrating domestic violence ($N = 993$)

Warning sign (perpetration)	<i>n</i> (%)
Puts down the partner	601 (60.5)
Lies to make themselves look good or exaggerates their good qualities	502 (50.6)
Acts like they are superior and of more value than others in their home	473 (47.6)
Does all the talking and dominates the conversation when partner is present	411 (41.4)
Acts like a victim	402 (40.5)
Acts as if they own the victim	370 (37.3)
Acts depressed	315 (31.7)
Tries to keep the victim away from her/his work or other activities	304 (30.6)
Change in job performance: poor concentration, mistakes, slowness, inconsistent work quality	271 (27.3)
Takes paid or unpaid time off that seems related to an abusive situation	173 (17.4)
Contacts their partner while at work to say something that might scare or intimidate them	169 (17.0)

to work. If yes, because less is known about perpetrator's experiences in the workplace, participants described, in an open-ended format, how the work was affected.

2.2.6. DV resources received from workplace

Participants who believed they knew someone at work who had been abused or had been abusive responded "yes," "no," or "don't know/not sure" to the question "To your knowledge, have these victims or abusers received any resources or other help from your workplace?" And, if "yes," were asked to "please specify what kind of resources, and how helpful they were" in an open-ended format.

2.3. Data analysis

Closed-ended responses were analyzed using descriptive statistics, Chi-square analysis and analysis of variance (ANOVA) in SPSS 21 (SPSS, Chicago, IL, USA). To analyze open-ended responses, the first author and two research assistants read and reread the responses and individually developed coding guides for each question [37]. The individual coding guides were then compared, discussed and revised. The two research assistants then independently applied the codes to the responses and discussed revisions to the coding guide with the first author as needed. Next, the research assistants came together to compare and consolidate their codes. Discrepancies were resolved through discussion and when a decision could not be reached, the first author was consulted. Frequencies for the codes were computed using SPSS 21.

3. Results

3.1. Demographic characteristics

A total of 8,429 people completed the survey, most in English ($n = 8,051$, 95.5%). Most participants were female ($n = 6,608$, 78.4%); the remaining identified as male ($n = 1,723$, 20.4%), transgender or other ($n = 37$, 0.4%), or did not provide a response ($n = 61$, 0.7%). The majority of participants were born in Canada ($n = 7,394$, 87.7%) and provided multiple ethnic origins, most commonly British (e.g., English), European (e.g., German), and North American (e.g., Canadian). Most participants ($n = 8,041$; 95.4%) were currently working in some way (e.g., full or part-time, casual, seasonal, etc.) and many reported working (or, if currently unemployed, having their last job) in the educational (28.2%) or healthcare and social assistance (23.8%) sectors. All other sectors were < 9% each, and 8% indicated "other." Other sample characteristics are summarized in Table 3. Additional demographic details are available elsewhere [38].

3.2. DV status

Overall, 33.6% ($n = 2,831$) of participants had experienced DV at some point in their life (for further details on general DV experiences, see Ref. [19]). Women were more likely (37.6%, $n = 2,483$) to experience DV than men (17.4%, $n = 300$) [19].

3.3. Perceptions of others' DV victimization and its warning signs

Among all participants, 35.4% ($n = 2,984$) believed they had at least one coworker (currently, or, if unemployed, at their last job) who was experiencing, or had previously experienced, DV (24.9%, $n = 2,102$ did not; 33.2%, $n = 2,801$ were not sure; 6.4%, $n = 542$ did not respond). Nearly half of participants (48.7%, $n = 4,101$) had ever recognized at least one warning sign that a coworker was experiencing DV; the average number was just over five (mean, $M = 5.58$; standard deviation, $SD = 4.31$). Participants with their own lifetime

Table 3
Sample characteristics

Characteristic	n (%)
Age (y)	
15–24	228 (2.7)
25–34	1,474 (17.5)
35–44	1,994 (23.7)
45–54	2,679 (31.8)
55–64	1,780 (21.1)
65–74	208 (2.5)
75+	22 (0.3)
Employment status (current)	
Permanent	6,834 (81.1)
Temporary/fixed-term contract	698 (8.3)
Casual/Seasonal	361 (4.3)
Unemployed	125 (1.5)
Other (e.g., retired, on leave, mixed types)	369 (4.4)
No response	42 (0.5)
Union status (current or last job)	
Unionized	6,862 (81.4)
Nonunionized	1,471 (17.5)
No response	96 (1.1)
Work hours (current or last job)	
Full-time (≥ 30 h/wk)	7,180 (85.2)
Part-time (< 30 h/wk)	1,141 (13.5)
No response	108 (1.3)
Size of workplace (current or last job)	
< 20 workers	1,597 (18.9)
20–99 workers	2,690 (31.9)
100–500 workers	1,932 (22.9)
> 500 workers	2,112 (25.1)
No response	98 (1.2)

DV experience (i.e., DV at any point) were more likely to report currently having a coworker who they believed had experienced DV (see Table 4), were more likely to have ever recognized a DV warning sign (see Table 4), and, among those who recognized a warning sign, recognized significantly more of these ($M = 6.06$, $SD = 4.35$) compared to those who had not experienced DV ($M = 5.29$, $SD = 4.27$), $F_{1,4099} = 30.68$, $p < 0.001$. The most common warning signs observed were signs of anxiety and fear, missing or lateness for work, emotional responses (e.g., upset, flatness, depression etc.) and changes in job performance (see Table 1).

3.4. Perceptions of others' DV perpetration and its warning signs

In total, 11.8% ($n = 993$) believed they had at least one coworker (currently, or, if unemployed, at their last job) who was perpetrating DV, or had previously (45.3%, $n = 3,821$ did not; 35.0%, $n = 2,949$ were not sure; 7.9%, $n = 666$ did not respond). Nearly 30% of participants (29.2%, $n = 2,459$) had ever recognized at least one warning sign of DV perpetration; the average number was 3.96 ($SD = 2.83$). Participants with lifetime DV experience were more likely than those with no DV experience to believe they currently had at least one coworker who had been abusive, but were also more likely to report not knowing/being unsure as to whether they had an abusive coworker (see Table 4). Similarly, participants with lifetime DV experience were more likely to have ever recognized at least one perpetration warning sign in the workplace (see Table 4), and, among those who had recognized a warning sign, recognized significantly more ($M = 4.21$, $SD = 2.77$) compared to those with no DV experience ($M = 3.80$, $SD = 2.86$), $F_{1,2457} = 12.29$, $p < 0.001$. The most common warning signs observed by those who reported recognizing DV perpetration at work were the perpetrator putting down their partner, lying to make themselves look good, acting like he/she is superior/of more value than others in their home, and doing all the talking/dominating the conversation when their partner is present (see Table 2).

Interestingly, the proportion of participants who believed they knew someone who is (or was) experiencing DV (35.4%) was significantly greater than the proportion who believed they knew

Table 4
Awareness of coworker domestic violence (DV) victimization, perpetration and recognition of warning signs by DV status

DV Status	Coworker DV victimization				DV victimization warning sign		
	No n (%)	Yes n (%)	Don't know/not sure n (%)	χ^2	No n (%)	Yes n (%)	χ^2
Lifetime DV experience	456 (17.9)	1,185 (46.4)	912 (35.7)	182.96*	1,288 (45.5)	1,543 (54.5)	58.40*
No DV experience	1,646 (30.9)	1,799 (33.7)	1,889 (35.4)		3,040 (54.3)	2,558 (45.7)	
	Coworker DV perpetration				DV perpetration warning sign		
Lifetime DV experience	1,034 (41.2)	428 (17.0)	1,050 (41.8)	115.56*	1,884 (66.5)	947 (33.5)	37.76*
No DV experience	2,787 (53.1)	565 (10.8)	1,899 (36.2)		4,086 (73.0)	1,512 (27.0)	

* $p < 0.001$.

someone who is (or was) perpetrating DV (11.8%; $z = 36.12$, $p < 0.01$). Overall, women (53.0%, $n = 1,597$) were more likely than men (47.5%, $n = 378$) to believe they had a coworker who had experienced DV, $\chi^2 = 7.53$, $p < 0.01$, while men (26.3%, $n = 209$) were more likely than women (21.9%, $n = 662$) to believe they had a coworker who had perpetrated DV, $\chi^2 = 6.63$, $p = 0.01$. Gender did not interact with DV experience to predict whether participants believed they recognized a DV victim or perpetrator.

3.5. Workplace impacts of DV victimization and perpetration

Among participants who believed they currently knew a coworker who had ever experienced DV, 49.5% ($n = 1,476$) thought the DV had affected their coworker's ability to work (16.0%, $n = 477$ did not; 32.8%, $n = 979$ were not sure; 1.7%, $n = 52$ did not respond). The most common ways they believed coworkers' work to be affected were being distracted (81.4%, $n = 1,201$), tired (77.4%, $n = 1,142$), or unwell (79.9%, $n = 1,179$). Being injured (22.4%, $n = 331$) and "other" impacts (9.9%, $n = 146$) were less frequently seen as impeding the coworkers' ability to work, and some participants were not sure how the work was affected (4.4%, $n = 65$).

Among participants who believed they currently knew a coworker who had ever perpetrated DV, 37.9% ($n = 376$) thought the abusive behavior had affected their coworker's ability to work (41.0%, $n = 407$ weren't sure; 16.0%, $n = 159$ did not). A total of 264 individuals responded to the open-ended question regarding how the perpetrator's work had been affected. The most common impact on perpetrators was difficulty with concentration or being distracted (29.9%, $n = 79$), for example, "unable to stay in the zone, always thinking about their spouse and the problems" and "unable to focus." This problem was often, but not always described alongside the second most common theme (26.1%, $n = 69$), problems with work quality and productivity:

"Tendency to make mistakes by being distracted, then blames their home life for being the cause of their distraction."

"They don't seem to be able to focus during the periods of abuse and then don't get the job all done..."

Absenteeism (21.6%, $n = 57$) was a common theme, as was aggression or anger in the workplace (23.5%, $n = 62$):

"Transferred inappropriate behaviors to the workplace—bullied coworkers."

"Very confrontational, aggressive, and paranoid towards colleagues."

and other descriptions of the perpetrator as a poor coworker (21.2%, $n = 56$):

"Always having fights with coworkers at the workplace. Putting down coworkers' performance and boasting of their own importance and value to the company."

"They are not easy to work with and constantly rebellious toward the work process."

Other less frequent themes included emotionality (i.e., other than anger, e.g., tearful, moody etc.; 8.7%, $n = 23$), signs of mental health-related challenges (e.g., anxious, stressed, etc.; 7.6%, $n = 20$) and spending work time engaging in abusive behaviors toward their partner (most often harassment; 7.6%, $n = 20$).

3.6. DV resources received from workplace

Of the 37.5% ($n = 3,159$) participants who believed they knew a DV victim or perpetrator at work, most (57.6%, $n = 1,821$) did not know or were not sure if that person had received any resources or help from the workplace. Only 13.1% ($n = 413$) reported the person had received resources/help; the remaining reported the person had not received resources/help (21.4%, $n = 677$), or did not respond to the question (7.9%, $n = 248$). Of those who knew someone who had received help, 350 provided details in an open-ended response. By far the most common supports described were counselling (32.0%, $n = 112$) and employee assistance programs (EAP; 30.3%, $n = 106$), and often counselling was described as a support received through an EAP. Other common responses had to do with referrals to, or use of, services outside the workplace (e.g., family services, women's shelter, etc.; 20.9%, $n = 73$), work accommodations (e.g., time off, schedule flexibility, adjustment of deadlines, etc.; 16.3%, $n = 57$), and general support at work (e.g., a listening ear; 14.3%, $n = 50$). Safety-related supports at work (e.g., development of safety plan; 9.1%, $n = 32$) and the provision of DV-related materials (e.g., pamphlets; 6.3%, $n = 22$) were less frequent. Some responses specified that the support received was from management (7.7%, $n = 27$) or the union (9.1%, $n = 32$).

4. Discussion

Nearly 40% of respondents believed they had recognized a DV victim and/or perpetrator in the workplace. This finding lends support to the notion that DV is not only a private or personal issue; its impacts extend far beyond the home and others are often aware of its occurrence, although they may not be sure whether or how to help [24–27]. Our finding that 35.4% of respondents reported knowing a coworker who had experienced DV is higher than some previous estimates [e.g., 20], but lower than others [23], perhaps reflecting differences by region or work sector. Respondents reported recognizing a variety of warning signs in the workplace; several for victimization (e.g., anxiety and changes in work performance) are consistent with what little previous research has been conducted in this area [22]. Reports of awareness of DV victimization was more common than reports of awareness of perpetration, but it is unclear whether this reflects the ease of detecting victimization and the difficulty of hiding it relative to perpetration, and/or whether victims are more likely to disclose

their victimization to coworkers than perpetrators are to discuss their abusive behavior. The pattern of sex differences in reports for recognition of victimization and perpetration may also be an indication that sex composition of a workplace plays a role. For example, recognition of victimization may be more common in female-dominated work sectors (because women are more likely to experience DV, especially severe forms) whereas recognition of perpetration may be more common in male-dominated work sectors (because men are more likely to be perpetrators of DV, especially severe forms) [6].

People who have themselves experienced DV were significantly more likely to report awareness of victimization and perpetration, and warning signs. This suggests that those with DV experience may have insight into others' experiences, or at least recognize the warning signs more readily. Thus the insights of those with direct DV experiences may be of assistance in developing and providing various forms of workplace support for DV (e.g., peer support). Our findings corroborate previous self-reports by victims and perpetrators that DV interferes with the ability to do one's job [11,14], but they also reveal that coworkers are often aware of this impact. Finally, it appears that coworkers are often unsure if victims and perpetrators have received workplace support for DV; whether this reflects discretion in the provision of support or simply a lack of support is unclear.

4.1. Limitations

Our research is limited in several ways. First, our sample is not a random, representative sample, and this may have influenced results. For example, overrepresentation from female-dominated sectors (such as healthcare/social assistance) may have resulted in higher rates of reported victimization recognition than would be found otherwise (and perhaps lower rates of reported perpetration recognition). However, the size of the sample, and the consistency of our DV prevalence rate with previous national samples [39,40] lends validity to our findings. Second, although we have used the terms *awareness* and *recognition*, we have no way of knowing the *accuracy* of people's perceptions of coworkers' DV victimization or perpetration. Moreover, although we found that DV victims were more likely to report recognizing DV, it is possible that in fact their perceptions are biased by their own experiences and that they "see" DV that is not there. Furthermore, although we asked about perceptions of various warning signs, we did not specifically ask participants whether they had witnessed DV in the workplace or not. We are also unable to discern from our data the actual presence of DV warning signs (or recognition of other signs not listed) and the extent to which respondents detected signs that were not there; similarly, we are unable to estimate how often observable signs of DV victimization and perpetration go undetected in the workplace.

4.2. Future research

Further research is needed in several key areas. First, our findings that people are often not sure if their coworkers have received support, and that the most common type of support received was counselling, may be further indications that workplaces are ill-prepared to provide victims and perpetrators with the range of services they might need. Therefore, we need to understand the ways in which workers and workplaces respond when they become aware of DV victimization or perpetration as well as the current supports in place (e.g., training, policy, etc.) to help them do so. This information will contribute to another area of urgent need: evaluation of the effectiveness of both formal and informal workplace supports so that workers and workplaces can be provided with

evidence-based guidance regarding how to appropriately respond to DV. Finally, we have speculated that awareness of DV victimization and perpetration in the workplace may impact workplace culture and perceptions of workplace safety [14], which ultimately could lead to decreases in job satisfaction and productivity [41]; we are not aware of any research examining such issues as they relate to DV. To this end, further research from a coworker perspective on the effects of others' DV, whether direct (e.g., harm) or indirect (e.g., stress from knowing about it), would also be useful.

Given that nearly 40% of our sample reported being aware of DV victimization and/or perpetration in the workplace, our findings highlight the possibility that victims and perpetrators are not the only ones who may benefit from workplace DV supports. Previous findings demonstrate that coworkers of DV victims can experience stress related to the DV, and may even be bothered or harmed by the perpetrator [18–20]. Thus, workplace supports and resources addressing DV should take into account the potential for "collateral victims" or vicarious trauma [42]. Research is needed to establish the most effective ways of addressing DV in the workplace—for victims, perpetrators, and their coworkers. Nevertheless, for the best chance of solving this problem, we argue the workplace must be included as a part of a multipronged, comprehensive solution.

Conflicts of interest

All authors have no conflicts of interest to declare.

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