

Crossover of Workplace Aggression Experiences in Dual-Earner Couples

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This study investigates whether workplace aggression experienced by one or both members of a couple accounts for increases in the psychological distress of the victim's partner. Viewing the work-family interface and stress-strain processes as dyadic, and open to interindividual and interdomain contagion, analyses were conducted on matched data from a large-scale population health survey containing information on both working adults from 2,904 couples. Multilevel analysis of bidirectional crossover, while controlling for common stressors, supports the proposition of a crossover of stress resulting from workplace aggression. This finding highlights the complexities of work-family dynamics and of the deep penetration of workplace aggression into the lives of dual-earner partners.

Keywords: workplace aggression, stress crossover, work-family conflict, mental health

Workplace aggression is a form of antisocial employee behavior that includes acts of physical violence, verbal threats, and harassing behaviors. Most sources indicate that workplace aggression is not uncommon; that it is an important workplace stressor to be considered in stressor-strain frameworks and a serious occupational health issue (e.g., Barling, 1996; Keashly, 1998; Keashly & Harvey, 2005; Schat & Kelloway, 2003; Neuman & Baron, 1998). Indeed, survey data reports about 55 percent of people saying they were physically attacked on the job during their lifetime (Northwestern National Life, 1993) and, in another investigation, half of the sample reported they had been bullied during their working lives (Rayner, 1997). A large-scale survey found that 1 in 20 American workers were physically assaulted, 1 in 6 sexually harassed, and 1 in 3 verbally abused in their workplace over a one-year period (U.S. Postal Service Commission on a Safe and Secure Workplace, 2000). By some estimates, one of every two women in the workforce will be sexually harassed at least once during their careers (Fitzgerald & Shullman, 1993).

As studies shed light on the individual and orga-

nizational causes and consequences of these various forms of workplace aggression, there remain unresolved questions related to how such aggression may impact family systems. There is a distinct possibility that the stress resulting from workplace aggression crosses over to the victim's partner (Westman, 2001). Crossover is said to happen when the stress experienced in the workplace by the individual leads to strain being experienced by the individual's partner at home (Bolger, DeLongis, Kessler, & Schilling, 1989; Westman, 2001).

In order to gain a better understanding of a possible crossover effect, the aim of this study is to investigate whether workplace aggression experienced by one or both members of a couple accounts for increases in the psychological distress of the victim's partner when other work- and home-domain factors are controlled. The study is based on a large sample of employed adults wherein both partners' work experiences were considered.

Background

There is a large range of what might constitute workplace aggression, from verbal abuse to homicide, including physical and nonphysical events as well as threats of assault, psychological aggression, and vicarious violence (Keashly & Jagatic, 2003; Neuman & Baron, 1998; Neuman & Keashly, 2003; Schat & Kelloway, 2003). This paper relies on the notion of workplace aggression because it encompasses different forms of mistreatment in the workplace, including high intensity physical violence as

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well as intimidation and/or being the object of unwelcome remarks or actions of a sexual nature. People in their workplace may experience being grabbed, pushed to the floor, kicked, or other forms of physical aggression. They may also experience insults, sexual touching, sarcasm, intimidation, and verbal threats to injure them or to damage or destroy personal property. As such, drawing from the conceptual work of Andersson and Pearson (1999), we define workplace aggression as a form of mistreatment in organizations that involves antisocial employee behavior that violates norms.

The personal and organizational consequences of such acts include fear reactions, psychological distress, sleep disturbance, headaches, digestive problems, and somatic symptoms (LeBlanc & Kelloway, 2002; Marchand, Demers, & Durand, 2005a; McDermut, Haaga, & Kirk, 2000; Piotrkowski, 1998; Richman et al., 1999; Rogers & Kelloway, 1997; Schat & Kelloway, 2000, 2003), as well as lower job satisfaction, greater job stress, increased considerations of job change, and an increased likelihood of bringing mace, a gun, or another weapon to work (Budd, Arvey, & Lawless, 1996). Workplace aggression in the form of bullying has further been associated with various stress symptoms (Leymann & Gustafsson, 1996) and with posttraumatic stress disorder (Tehrani, 2004). The vicarious experience of such aggressions may also be damaging. One study found that exposure to work-related violence in one's workplace seems to be sufficient to elicit lower general well-being (Leather, Lawrence, Beale, Cox, & Dickson, 1998). As such, it is clear that aggression through its multiple faces is associated with a host of stress-related outcomes and is easily recognized as potential source of stress for the individual comparable to many other known stressors (Keashly, Hunter, & Harvey, 1997). The view examined in this paper is whether this source of stress can have comparable impacts on the family systems as are known for other sources of stress.

Work-Family Models

Looking at possible mechanisms that may transfer the stress resulting from workplace aggression to the family system, work-family models offer interesting insights into the interdependencies between the worlds of work and family (Greenhaus & Parasuraman, 1999). In simple terms, work pressure is likely to interfere with responsibilities at home and home life may likewise impede the accomplishment of work duties (Frone, Russell, & Cooper, 1992). Such

models offer a dynamic and reciprocal view of work-family circumstances and, as such, recognize the synergistic nature of the work-family interface. It is also important to recognize that, from a modeling perspective, studies in this stream of research mostly examine the work-family interface as an intra-individual phenomenon wherein work-family conflict is an individual strain resulting from mutually incompatible role pressures from the work and family domains (Edwards & Rothbard, 2000; Greenhaus & Beutell, 1985; Kahn & Quinn, 1970).

Research in this area provides insights into the individual experience of work-family conflict. For instance, stressors experienced by an individual in the work domain may interfere with his/her ability to address family demands. This stream of research, however, is largely mute on the interindividual processes or possible crossover effects likely to be felt in the family system. It does not recognize work-family dynamics as dyadic, interindividual, and interdomain contagion. Accordingly, work-family models can be expanded to include other experiences including these other lines of influence.

Crossover Mechanisms

The crossover perspective offers another view of the work-family interface. Within the context of a couple, crossover emphasizes the dyadic relations in which each partner's work and family experiences affects the other partner's experiences (Gareis, Barnett, & Brennan, 2003). As such, the crossover proposition expands the chain of effects to hypothesize ambient effects on family members. More specifically, Westman and Vinokur (1998) and Westman (2001) specified three main mechanisms that can account for the crossover process: (1) common stressors, (2) an indirect mediating interaction process, and (3) direct crossover through empathic reactions. The first mechanism holds that common stressors may be affecting both partners. In the present study, we include control variables that should help rule out such spurious relationships. The explanation of crossover as an indirect process focuses on reciprocal interactions in the couple dyad, including coping strategies, communication patterns (i.e., intensity and openness), demands for social support, and social undermining. When job stress spills over into family-domain, these reciprocal interactions, depending on their nature, may initiate or exacerbate a negative interaction sequence with the partner. Finally, direct crossover through empathetic reactions involves feeling the partner's pain.

That work can have an effect on family members has been demonstrated in a number of ways including how parents' job insecurity affects their children's cognitive functioning and school performance (e.g., Barling & Mendelson, 1999; Barling, Zacharatos, & Hepburn, 1999). What the crossover proposition focuses on in particular is the interindividual processes of transmitting stress and strain. This perspective therefore recognizes that the crossover of the stress resulting from workplace aggression of one member to another in a family dyad may be but one source of stress amongst others that may include possible family tensions and each partner's other work experiences. Studies have generally been supportive of a crossover proposition with other sources of stress than aggression, although not all factors and relationships have been tested simultaneously in one study (Westman, 2001). For example, assessing the various potential contributing factors is needed to obtain robust evaluations of the crossover hypothesis, but this is challenging in terms of research design requirements. Moreover, most stress crossover studies have investigated whether the husband's job stress impacts the well-being of their wives. With a significant increase in female participation in the workforce, studies should realistically address bidirectional crossover (Westman, 2001).

This research bridges some of these gaps found in crossover research generally and the need to test the role of aggression as a source of stress specifically. The study includes employed individuals from dual-earner couples, which allows a couple-level analysis of bidirectional crossover. We retained members of dual-earner couples only and therefore are able to address the issue of common stressors experienced by both spouses at home and at work. Financial strain, for instance, may increase strain in both partners and what may seem like a crossover effect, is actually the result of common stressors. Also, the stress experienced in the workplace by one partner may equally explain her or his strain and not simply be because of the other's work to home stress. It is therefore important, as in this study, to control for such common and individual stressors (e.g., decision authority, working hours, work schedule irregularity, marital strains) that have been linked to psychological distress (Marchand et al., 2005a) before we can point to the possibility of stress crossover.

Another feature of the current study is the use of data from a large-scale population health survey containing information on both working adults from couple dyads. It offers a strong basis to test the mutual propositions of crossover effects and the introduction

of aggression as a workplace stressor. Accordingly, there is sufficient power to detect even small effects, and the results are likely generalizable to the general population of dual-earner couples. Moreover, the questionnaire was administered by a trusted state statistical agency, and it contained questions about three forms of workplace aggression (i.e., violence, intimidation, and sexual harassment), a few other work-related variables, and numerous health-related questions. Data collected by a trusted agency, rather than by an employer-sponsored survey, probably curtails the problem of underreporting of workplace aggression (Murphy, 1996; Painter, 1987; Tutt, 1989). The size of the sample further offers the needed power to detect significant differences in psychological distress even when low occurrences of experienced workplace aggression are reported.

In order to show a crossover effect, two main hypotheses were tested. It was first hypothesized that psychological distress is correlated within couples (hypothesis 1). For a crossover effect to exist, the level of psychological distress of one partner in the couple needs to be associated with the level of psychological distress of the other partner. Second, we hypothesized that individual experiences of workplace aggression are positively associated with the other partner's psychological distress after accounting for other possible stressors, age, and gender (hypothesis 2). That is, the effect of workplace aggression on the other partner was expected to remain significant after controlling for both partners' other sources of work stress (i.e., decision authority on the job, working hours, and working of irregular shifts), personal characteristics (i.e., sex, age), and the quality of the relationship (i.e., marital strain).

Methods

Data

Cross-sectional data were derived from the Quebec Health and Social Survey (QHSS) conducted in 1998 (QHSS-98) in Canada. QHSS-98 provided a representative sample of the province of Quebec population based on a complex sampling design of 11,986 randomly selected households (response rate = 82.1%).¹ For each household, all the members aged 15 and over were invited to fill out a questionnaire relating to health and socioeconomic indicators. The survey was completed by 20,773 respondents (response rate = 84.0%), for an overall response rate of

¹ This dataset was also used in the Marchand, Demers, and Durand (2005a) study that investigated work and non-work determinants of psychological distress.

69% (82.1% * 84.0%). The data were weighted according to selection probabilities and response rate, as well as demographic distributions by gender, age, and region based upon the Canadian census. For this study, a subsample of households containing 5,808 individuals nested in 2,904 dual-earner couples was selected. Criteria for inclusion were living with a partner and each individual being employed at the time of the survey. All the variables used in this study were obtained for each individual in the sample.

Measures

Psychological distress. Psychological distress was measured with an adaptation of Ilfeld's (1976) "Psychiatric Symptoms Index" (PSI). Used in Quebec since 1987, this index includes 14 items that measure nonspecific psychological distress, and its questions deal with states of depression and anxiety as well as symptoms relating to hostility and cognition in reference to the week preceding the survey (Daveluy et al., 2000). For each indicator a 4-point Likert scale (*never/very often*) was used. The scale was constructed from the sum of the indicators, each being calibrated so as to range between 0 and 100. To correct for the marked asymmetry of the distribution, a square-root transformation was applied, which yielded a scale from 0 to 10.

Workplace aggression. Workplace aggression was measured and computed here in the same way as in Marchand et al. (2005a), using a three-item scale with a four-point Likert response format ranging from 1 (*never*), 2 (*occasionally*), 3 (*often*), to 4 (*very often*). Respondents were instructed to indicate whether, during the past 12 months, they had been subjected to (a) physical violence, (b) intimidation, (c) unwelcome remarks or gestures of a sexual nature in the workplace. The variable was then coded 1 for respondents reporting at least one such situation (*occasionally, often, or very often*), and coded 0 for no such occurrences. Partner workplace aggression is a binary variable coded 0 if the partner had not experienced any of these situations and 1 if he/she had faced at least one such situation. Following an epidemiological measurement approach (Kessler, Thompson, & Evans, 1986), this variable thus indicates exposure to at least one form of workplace aggression. Working with each item separately or with the original response format would have produced severely skewed distributions.² Overall, this measure provides a conservative test of the effect of aggression.

Control variables. Working hours were measured by adding the number of hours spent on the main job and, if applicable, on other jobs. Work schedule irregularity was based on a 4-point scale (*never/all the time*) measuring the frequency of respondent exposure to irregular or unpredictable schedules. Decision authority was derived from the complete and validated French-language version (Larocque, Brisson, & Blanchette, 1998; Niedhammer, 2002) of the Karasek (1985) Job Content Questionnaire (JCQ). Based on 4-point scale (*disagree/agree*), decision authority is obtained by summing three items (e.g., my job allows me to make a lot of decisions on my own.). The marital strains variable was based on an additive scale of three items (true/false) developed by Wheaton (1994) (e.g., your partner does not understand you, your partner does not show enough affection, your partner is not committed enough to your relationship). Gender is a dichotomous variable coded

0 for male and 1 for female. Age was measured on an ordinal scale format that included 12 categories, ranging from 15 years old to 65 years old and over.

Analysis

The data took a two-level hierarchical structure in which individuals ($n_1 = 5808$) were nested in couples ($n_2 = 2904$). Multilevel regression models (Bryk & Raudenbush, 1992; Goldstein, 1995; Snijders & Bosker, 1999) were used because they make it possible to simultaneously consider variations in psychological distress among individuals and among couples, as well as assess the effect of a set of independent variables on these variations. Such models also provide corrected standard errors for the clustering of observations (design effect).

The first multilevel regression model (variance component) estimated overall mean of psychological distress scores as well as its variability by individuals and couples (random variances). If the couple level contributes significantly to psychological distress, the random variance is not equal to 0, and calculating the intraclass correlation (ρ) makes it possible to quantify the proportion of the total variation for psychological distress that occurs between couples. ρ also allows us to compute the reliability of the mean of psychological distress across couples.³ Second, the variables concerning workplace aggression were introduced into the equation in order to verify their unadjusted contributions to psychological distress. Third, the control variables (working hours, work schedule, decision authority, marital strains, gender, age) were entered in the equation in order to determine whether the effects of the individual and partner workplace aggression are modified once other stressors and individual characteristics are accounted for. Last, individual and partner workplace aggression were tested for interaction.

The model parameters were estimated by the method of iterative generalized least-squares (IGLS) (Goldstein, 1986, 1995) embedded in MLwiN Statistical Software version 1.1 (Rasbash et al., 2000). There was no need to center the independent variables as only variance component models were estimated (Goldstein, 1995; Hox, 1994). Because the data were weighted, Sandwich robust standard errors were estimated (Goldstein, 1995). In all cases, the significance of individual regression coefficients was estimated using a bilateral Z-test and the probability of rejection of the null hypothesis was set at $p < .05$. The random coefficients were tested using a likelihood ratio test with halved p values (Snijders & Bosker, 1999). The joint contribution of the variables, as well as interactions, was assessed by means of

² Our descriptive statistics indicate that 97.1%, 83.3%, and 96.4% of respondents had never been the target of physical violence, intimidation, or sexual harassment in their workplace respectively during the 12 months preceding the survey.

³ In a two level model, $\rho(\rho)$ is computed as $\rho_j = \sigma_\mu^2 / (\sigma_\mu^2 + \sigma_\epsilon^2)$, where σ_μ^2 is the estimated residual variance at level 2 and σ_ϵ^2 is the estimated residual variance at level 1 (Goldstein, 1995). Reliability across couples is computed as $\lambda_j = n_j \rho_j / 1 + (n_j - 1) \rho_j$, where n_j is sample size in each group (Snijders & Bosker, 1999).

a likelihood ratio test that followed a χ^2 distribution with the degrees of freedom (*df*) equal to the number of additional parameters in the model.

Results

Table 1 presents descriptive statistics, Cronbach alpha and bivariate correlations between variables for the overall sample. A positive correlation between the respondent's report of workplace aggression and psychological distress is consistent with the literature. Also, the control variables are associated with psychological distress as could be expected. Finally, the results suggest that women work fewer hours but experience more psychological distress than men.

Table 2 presents results of three multilevel models. Model 1 is the baseline model estimating the overall mean of psychological distress across individuals and couples as well as residual variances at each level. Results show significant individuals and couples variations and the intraclass correlation (ρ_j) is estimated at 0.277, that is, 27.7% of the variance of psychological distress is between couples. This means that the level of psychological distress of one member is associated with the level of his/her partner, thus supporting hypothesis 1. Reliability of couples mean is estimated at 0.43. Some caution, however, is needed in interpreting this latter statistic because reliability at the group level is influenced by the sample size in each group; that is, reliability increases as sample size increases (Snijders & Bosker, 1999). With only two individuals in each group (i.e., dyad), such a low coefficient is not surprising. In order to obtain an estimate of λ_j above the .70 threshold, we would need an estimate of ρ_j of .54, meaning that half of the variance would have been within couple and half of the variance between couples. As an additional test, we found high within-group reliability with a mean *rwg(j)* score of 0.95.

In model 2, workplace aggression is introduced in the equation. Both individual and partner workplace aggression relate to higher levels of psychological distress, thus supporting hypothesis 2. However, an individual's workplace aggression shows a stronger association with his/her own psychological distress. That is, one's experience of workplace aggression is more important in relation to psychological distress than the partner's experience. The variables jointly explain 6.0% of the variance at the couple level and 4.9% at the individual level. In model 3, the associations of workplace aggression and psychological distress are adjusted for control variables. Results reveal no substantial modification of the significance

Table 1
Descriptive Statistics and Correlations

	M	SD	Correlation matrix (diagonal replaced with Cronbach alpha)												
Psychological distress	3.27	2.07	.92												
Individual workplace aggression	0.19	—	.22**												
Partner workplace aggression	0.19	—	.08**	.12**											
Working hours	39.1	11.2	-.03*	-.02	-.02										
Irregular work schedule	2.06	1.01	.10**	.06**	.01	.17**									
Decision authority	8.91	2.10	-.05**	-.09**	-.03*	.21**	.13**						.81		
Marital strains	0.46	0.83	.27**	.06**	.02	.00	.03*	.72					-.03*		
Gender (female)	0.48	—	.11**	.03*	-.03*	-.35**	-.15**	.03*	-.15**				-.12**		
Age	9.53	1.89	-.10**	-.08**	-.07**	.02	-.03*	.03*	-.03*	.10**			-.12**		

* $p < 0.05$. ** $p < 0.01$.

Table 2
Results of Three Multilevel Models Predicting Psychological Distress

Variables	Model 1	Model 2	Model 3
Constant	3.25* (0.03)	2.98* (0.04)	2.71* (0.22)
Individual workplace aggression		1.09* (0.07)	0.93* (0.06)
Partner workplace aggression		0.27* (0.07)	0.26* (0.06)
Working hours			0.00 (0.00)
Irregular work schedule			0.19* (0.03)
Decision authority			-0.01 (0.01)
Marital strains			0.61* (0.03)
Gender (female)			0.48* (0.05)
Age			-0.05* (0.02)
Random variances			
Couples ($n = 2904$)	1.18* (0.08)	1.06* (0.08)	0.86* (0.07)
Individuals ($n = 5808$)	3.08* (0.08)	2.99* (0.08)	2.79* (0.07)
Goodness-of-fit			
χ^2 (df)	—	269.2 (2)*	833.2 (8)*
R^2 (couples)	—	0.06	0.17
R^2 (individuals)	—	0.05	0.14

Note. Unstandardized coefficients. Standard errors in parentheses.

* $p < .01$.

and magnitude of workplace aggression, thus providing more robust support for hypothesis 2. This model also highlights the contributions of work schedule, marital strains, gender, and age as additional variables associated with psychological distress. Rho is estimated at 0.236, which indicates that 23.6% of the variance of psychological distress is located at the couple's level. Tests for interaction between both partner's workplace aggression experiences yielded a nonsignificant result ($\chi^2 = 1.00$, 1 df , $p = .32$).

Discussion

The results of this study support the proposition of a crossover of the job stress resulting from workplace aggression from one partner to another. After accounting for other common sources of psychological distress for partners at both the individual and partner levels of analysis the effects noted for the crossover effect of partner's workplace aggression remained significant. Indeed, workplace aggression continued to explain a full 6% of the variation in psychological distress after these other factors was controlled.

It also appears that workplace aggression acts as a stressor independently of other stressors in predicting psychological distress. Accordingly, these results provide new evidence in support of the notion that there are probable effects of workplace aggression on victims and their partner. This should help advance our awareness of crossover effects as well as open up new research avenues that extend workplace aggres-

sion and work-family perspectives beyond traditional intra-individual spillover models.

These findings add to crossover research in at least two ways; they provide further support for the crossover concept within a strong research design, and they support the addition of workplace aggression to the sources of stress that should be studied within this paradigm. An important design feature was the large-sample and simultaneous analysis of the crossover proposition. Previous research has generally been limited to smaller convenience samples that made generalization of the results more precarious. This study was population-based and representative of dual-earner couples in a modern societal context and as such it makes generalization a bit easier. Moreover, the ability to control for other stressors in the analyses for both working adults in a couple greatly increases confidence in the transference of these finding to dual-earner couples. Previous work has tended to focus on a target wage earner, with little or no comparative data coming from the partner's work experience and the contribution that this might bring to the prediction of psychological strain resulting from work. Together, these improvements in the study design add further confidence to previous findings in support of crossover (Westman, 2001).

An important contribution of this study is the introduction of aggression at work to the study of crossover. Previous research has shown evidence in support of crossover based on the assessment of other common sources of work-related stress. This study

suggests that the workplace aggression suffered by one's partner can add to these predictive models. In this study the variance associated with the partner's workplace aggression continued to stand after controlling for several other individual and environmental factors. Future research might consider additional factors to be controlled, but the findings in this research suggest that these factors would need to be substantial to statistically negate what appears to be a sizable relationship.

Future research might best explore different paths that crossover effects might take. For example, it is possible to extend the analysis to include other family members and perhaps even coworkers as another form of crossover (e.g., Westman, 2001). Barling, Zacharatos, and Hepburn (1999) found correlations between work stress and children's well-being. Exploring the mechanisms of this relationship has been the subject of some study (Barling & Mendelson, 1999), but clearly the results in this study suggests that crossover may be a useful way of conceptualizing the effects as they occur on the extended family system. The idea of coworker or even leader-member crossover offers another provocative dynamic that would deserve some attention. We know from research on emotional contagion that the transfer of emotional or mood states from one person to another in the work environment is an occurrence observed towards coworkers and even customers (e.g., Barsade, 2002; Pugh, 2001). That this transference is observed for moods and emotions, it is readily possible that negative experiences associated with workplace aggression also show similar permeating effects. Indeed, literature on hostile work environments is also suggestive of such negative effects (e.g., Miner-Rubino & Cortina, 2004) and testing the relationships within the context of crossover would be an important advance.

In practice, for the individual, these results might have implications for interventions focused on removing threats of aggression and with respect to whom any help for recovery should be provided. It may be taken for granted that being aggressed can be a traumatic event with a long trajectory of effects and recovery that the victim may need assistance dealing with. Indeed, the evidence is mounting that aggression that is ongoing, repetitive, and attacking of the individual's sense of self can lead to deleterious personal consequences (see Fox & Spector, 2005; Einarsen, Hoel, Zapf & Cooper, 2003). Such cases would leave few in doubt that the organization has an important role to play in providing aid to recovery or

restitution. However, these results add a newer concern to this discussion. These results suggest that the effects do possibly cross over to others in the victim's environment and that any form of postevent assistance or restitution might also need to consider the partner. Unfortunately, and reservedly, at this point, it is too soon to know what this would involve. Hopefully, more research on crossover within this context will shed more light on the issue.

As with any study, there are limitations to consider. One limitation in the present study is the limited spectrum of behaviors included in the workplace aggression scale. The scale included only physical violence, intimidation, and unwelcome remarks or actions of a sexual nature in the workplace. Although these are meaningful forms of workplace aggression, they are not fully representative of the concept. In particular, the scale does not include subtler forms of workplace aggression such as hostile facial expressions, ostracism, obstructive behavior, social undermining, abusive supervision, and a wide assortment of bullying behaviors. The secondary data we used offered no alternative that would compare with multi-item scales that include a broader spectrum of aggressive behaviors (e.g., LeBlanc & Kelloway, 2002; Neuman & Keashly, 2003). A phenomenon such as workplace aggression might be advantageously measured with a more extensive range of items to help detect any number of behaviors that could predictably contribute to better measurement. However, the positive to be drawn from this study is that there is reason to venture into more elaborate data collection with the notion that aggression, in various forms and magnitudes, appears to have a nontrivial relationship to partners' own well-being.

Related to the above point, our scale development approach precluded analysis of possible differential outcomes of different forms of workplace aggression. Sexual harassment, for instance, may have different outcomes and crossover effects than physical violence. Future research conducted with more comprehensive measures of each of these variables may address whether different forms of workplace aggression have different effects on different outcomes. This study provided evidence that significant relationships exist and are worth pursuing further.

Another potential shortcoming to be considered is the use of cross-sectional data, which limits the extent of causal inference. Although it may seem improbable that psychological distress can fully account for aggression problems on the job, more complex causal relationships have not and can not be ruled

out. Nonetheless, it is comforting that the indirect (crossover) effects noted on the partners were significant despite controlling for other variables. The use of self-report data to measure variables of interest is always a threat to the validity of these types of findings. This study is therefore prone to conflated relationships noted in most studies of its type. However, we do note that the measures used in this study were part of a much larger population health survey that contained many other items and was being conducted under a fairly different auspice than the focus of this study. Moreover, we use information from both partners in this study creating a situation such that the independent and dependent variables are generated by different sources.

With regards to the specific mechanisms that account for the crossover process in this study, inclusion of significant control variables helped rule out the common stressors mechanism. Our research, however, provides few indications that would help determine what other mechanisms may be involved in the crossover of stress resulting from workplace aggression. We encourage further in-depth investigations of these mechanisms. These studies would need to consider how the stress of experienced workplace aggression affects interactions in the couple dyad. They may also attempt to include empathetic reactions as a possible crossover mechanism.

Last, the study was constrained by the data available in the QHSS. Variables such as an individual's personality, trait anxiety, etc. were therefore not included in the analyses. Two recent longitudinal studies suggest that such variables (i.e., self-esteem, hostility, Type A personality, internal locus of control, and sense of cohesion) do not modify associations between workplace variables and psychological distress (Marchand, Demers & Durand, 2005b; Paterniti, Niedhammer, Lang, & Consoli, 2002). These variables may well play a relevant role in the stress process but seem unlikely to negate the basic findings reported herein.

Overall, this study has advanced our confidence in the crossover proposition, particularly after weighing any of the above limitations in light of the improvements made by the study in design, sampling, analysis, and extension of variables. There is evidence, in this study, of the complexities of work-family dynamics and of the deep penetration of workplace aggression into the lives of dual-earner partners. Further research using longitudinal data would be a tremendous progress in further validating the crossover proposition.

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