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Psychological distress inequality between employed men and women: A gendered exposure model

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ARTICLE INFO

Keywords:

Canada
Family
Gender
Psychological distress
Work-family conflict
Work

ABSTRACT

This study examines an exposure model in which the work and family stressors and the access to resources are gendered and contribute to explaining the psychological distress inequality between sex categories, both directly and indirectly through work-family conflict. A multilevel path analysis conducted on a random cross-sectional sample of 2026 Canadian workers from 63 establishments was performed. Our exposure model fully explains the higher level of psychological distress among working women compared to working men. Women are more exposed to work-to-family conflict, have less decision authority, are more likely to be a single parent and have less self-esteem, factors that are directly associated with a higher level of psychological distress. On the other hand, women work fewer hours, have less irregular or evening schedules and have more social resources outside of work, which contribute to lower their level of psychological distress through less work-to-family conflict. By identifying which of the differences in exposure to work and family stressors and resources explain the greater psychological distress of working women compared to working men, and by examining the mediating role of work-family conflict in this process, this study identified specific paths to reduce psychological distress inequality between women and men in the workplace.

1. Introduction

Inequality between women and men in psychological distress is well documented but remain highly prevalent. According to the stress process model, the differential exposure to stressors and the differential access to resources are key mechanisms of mental health inequalities (Pearlin, 1999; Turner, 2010). From this perspective, the higher proportion of psychological distress among women results from their greater exposure to stressors and their access to fewer resources than men (Milner et al., 2019; Simon, 2014). However, some aspects of these exposure mechanisms leading to inequality in psychological distress need further exploration.

First, many researchers have tested the exposure hypothesis from a role perspective or by including global measures such as chronic stressors, job strain, work and family stress or psychosocial factors (Almeida & Kessler, 1998; Denton, Prus, & Walters, 2004; McDonough & Strohschein, 2003; Turner & Avison, 2003). Although these concepts are useful for a general understanding, McLeod (2013) argued that global measures of stressors say little about the specific stressors leading

to mental health inequalities. Others (e.g., Hughes & Galinsky, 1994; Roxburgh, 1996), using hierarchical regressions, gave important insight on the specific stressors involved such as psychological demands, lack of autonomy or job insecurity. However, stressors are generally introduced by block of variables with hierarchical regressions, obscuring the contribution of each gendered stressor to inequality in psychological distress. Moreover, many did not completely support the exposure hypothesis, thus questioning a central explanation of this inequality. These observations echo a recent reminder by Quinn and Smith (2018) regarding the need for developing new methods to document the relation between gender and health.

Second, comprehensive reviews present the articulation between work and family roles as a dominant factor driving women's greater psychological distress (Mirowsky & Ross, 2011; Rosenfield & Mouzon, 2013; Simon, 2014). However, there is no clear empirical evidence that women are more exposed to work-family conflict (Korabik, McElwain, & Champell, 2008; Shockley, Shen, DeNunzio, Arvan, & Knudsen, 2017). The gendered work and family conditions are suspected of being the key insights for the differential exposition to work-family conflict between

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<https://doi.org/10.1016/j.ssmph.2020.100626>

Received 29 April 2020; Received in revised form 19 June 2020; Accepted 24 June 2020

Available online 30 June 2020

2352-8273/© 2020 The Author(s).

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men and women (Marchand, Durand, Haines, & Harvey, 2015; Korabik et al., 2008; Shockley et al., 2017) and could give relevant information about how work-family conflict contributes to psychological distress inequality.

This study proposes to expand the comprehension of the exposure hypothesis (1) by focusing on the specific contribution of gendered work and family stressors, psychosocial resources and work-family conflict; and (2) by integrating work-family conflict as a gendered stressor mediating the relations between gendered work and family stressors and resources, on the one hand, and psychological distress, on the other hand.

1.1. Gendered work and family stressors

Chronic work and family stressors have been identified as major determinants of mental health (Harvey et al., 2017; Umberson, Thomeer, & Williams, 2013). The effect of work on mental health is generally studied through working condition such as psychological, physical and contractual demands (e.g. working hours, schedule), skills utilization, decision-authority, social support (from colleagues and superiors) and gratification (e.g. recognition and job security). These conditions are anchored in the job demands-control-support and the effort-reward imbalance models which have gained widespread acceptance in explaining the impact of the workplace on mental health (Harvey et al., 2017; Karasek & Theorell, 1990; Siegrist, 1996). As women generally report more demands, less working hours, less autonomy, less authority, less recognition, and more job insecurity, these models could shed light on the mechanisms involved in mental health inequalities between men and women (Bird & Rieker, 2008; Mirowsky & Ross, 2011).

There is growing evidence that a model of workplace stressors would gain from integrating interpersonal stressors such as conflicts at work and abusive supervision, but it is not clear whether women and men are unequally exposed to interpersonal conflicts (Marchand et al., 2015; Harvey, Blouin, & Stout, 2006; Tepper, 2007). A meta-analysis found that men are slightly more likely to report abusive supervision (Mackey, Frieder, Brees, & Martinko, 2015).

There is a growing recognition that occupational studies must pay attention to the contribution of family stressors on workers' mental health. Women generally spent more time than men on domestic tasks and were more likely to be single parents and to be caregivers of an older parent, which might contribute to the higher level of distress among women (Bird & Rieker, 2008; Rosenfield & Mouzon, 2013; Sarkisian & Gerstel, 2004). In addition, parental- and marital-related difficulties have been linked to psychological distress (Marchand et al., 2015). Almeida and Kessler (1998) gave support to the exposure hypothesis by including variables such as arguments with spouse and children. However, the method used did not allow for drawing clear conclusion about their respective contribution. The results remained ambiguous regarding the prevalence of marital and parental problems among women and men (Denton et al., 2004; Scott & Alwin, 1989; Simon, 1992; Young, Schieman, & Milkie, 2014).

1.2. Gendered psychosocial resources

Psychosocial resources, such as self-esteem, sense of control and social network support, were also identified as being important determinants of mental health inequalities. From an exposure perspective, many authors proposed to conceptualize resources as mediators between sex categories and mental health (Denton et al., 2004; Turner, 2010). Gender could contribute to developing and favoring certain resources associated with mental health. For example, in some contexts, hegemonic masculinity is an ideal associated with assertiveness, competition, and independence (Rosenfield & Mouzon, 2013). Thus, doing masculinity could mean displaying more self-esteem and feeling of control. Many studies showed that women usually reported lower

self-esteem and a lower sense of control than men (Mirowsky & Ross, 2011; Read & Gorman, 2011; Rosenfield & Mouzon, 2013). Women might also have closer relationships, which could be an important source of support (Rosenfield & Mouzon, 2013).

Nevertheless, the empirical evidence remains insufficient to explain inequality in psychological distress. Controlling for a range of psychosocial factors, including self-esteem, locus of control and social support, some studies showed that the difference in psychological distress between men and women remains significant (Bird, 1999; Denton et al., 2004; Nurullah, 2010; Walters, McDonough, & Strohschein, 2002). These findings encourage further investigation of the role of these psychosocial resources in psychological distress inequality.

1.3. Work-family conflict as a mediator of gendered stressors and resources

Stressors rarely occur alone, and disturbance in one area usually leads to disturbance in other areas of life (Pearlin, 1999). Many work and family stressors and psychosocial resources have also been associated with work-family conflict (Allen et al., 2012; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011), which in turn is known to be an antecedent of mental health problems (Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Work-family conflict is usually defined as a form of interrole conflict in which the two domains are mutually incompatible (Greenhaus & Beutell, 1985). This stressor may take two directions: work can interfere with family (WFC), but family can also interfere with work (FWC) (Amstad et al., 2011; Byron, 2005). Although these two constructs are related, they have distinct causes and consequences (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2005). It has been suggested that stressors from work may be more related to WFC, while stressors from family may be more strongly linked to FWC (Byron, 2005; Michel et al., 2011).

However, despite that work-family articulation has been presented as a central determinant of mental health inequalities (Rosenfield & Mouzon, 2013), there is no theoretical and empirical consensus on whether women or men are more exposed to WFC or FWC, leaving open the question of the role played by work-family conflict in the higher level of psychological distress among women compared to men (Korabik et al., 2008; Shockley et al., 2017).

Considering that both directions of work-family conflict are generally conceptualized as consequences of work and family conditions, gendered work and family stressors could lead to differences in both directions of the conflict, which can contribute to psychological distress inequalities between men and women (Byron, 2005; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Michel et al., 2011). The few studies that have examined whether differences between men and women in the exposure to WFC and FWC were responsible for the difference in psychological distress supported that the two directions of work-family conflict serve as mediators between gendered work and family conditions, and psychological distress (Emslie, Hunt, & Macintyre, 2004; Hughes & Galinsky, 1994).

1.4. A gendered exposure model

Further exploration is essential to deeply understand the processes and the stressors implied in the exposure hypothesis. As claimed by McLeod (2015, p. 152), "We don't know much about how social disadvantage produces stress exposures and the conditions under which stressors produce mental health inequalities, beyond the general notion that part of what it means to be socially disadvantaged is to have a more stressful life." To bridge this gap, we propose a gendered exposure model informed by gender relational theories.

According to Risman and Davis (2013) and Risman (2018), gender is a structure that defines constraints and opportunities based on sexual categories. Lorber (1994) suggests that gender (a) divides individuals into two social groups, male and female; (b) contributes to the

construction of perceptible differences between these groups; and (c) produces differential treatment legitimated by socially produced differences. Cultural beliefs about differences are thus easily transformed into belief in inequality or differentiated status (Ridgeway, 2014). As a social structure, gender can also manifest itself through other mechanisms which have been explored in other papers (e.g. Bilodeau, Marchand, & Demers, 2019) (Risman, 2018).

In this study, we posit that exposure to stressors and access to psychosocial resources constitute a gendered process. As shown in Fig. 1, our model posits sex categories as an antecedent of work and family stressors, work-family conflict and psychosocial resources. Second, these gendered stressors and resources are conceptualized as determinants of psychological distress and therefore serve as mediators between sex categories and psychological distress. Finally, work-family conflict plays a mediating role between sex categories, work and family circumstances and psychosocial resources, on the one hand, and psychological distress, on the other hand.

2. Material and methods

Data came from the SALVEO Study, which was aimed at evaluating the contribution of work, family, individual characteristics and social networks to workers' experience of mental health problems (Marchand et al., 2015). The study protocol was approved by the Ethical Committees of the University of Montreal, McGill University, Laval University, Bishop's University, and Concordia University. Data were collected between 2009 and 2012. A two-step strategy was used to select the sample. First, private companies in the Province of Quebec (Canada) were randomly selected from the customer list of a large insurance company; these companies were invited to participate in the study. In total, 63 workplaces accepted the invitation (response rate of 41%), 30% in the industrial sector and 70% in the service sector, with sizes ranging from 25 to 1900 employees. Second, employees were selected randomly in each workplace and were invited to participate in the study by completing a questionnaire on a touch-screen monitor during work hours. Overall, 2162 workers agreed to participate in the survey, yielding a response rate of 73.1% (range of 51.2%–100%). Participants signed an informed consent document, and they were provided with the necessary instructions. After deleting cases with missing data (N = 136), this study included a sample of 2026 workers (49% of women).

2.1. Variables

Psychological distress was obtained using the 12-item General Health Questionnaire (GHQ-12). The GHQ-12 has been shown to have good validity and reliability in the general population for the French and the English questionnaires (Drapeau, Marchand, & Beaulieu-Prévost, 2012). It encompasses an array of symptoms that are not specific to one mental disorder. It includes items such as the following: *have you recently been able to enjoy your normal day-to-day activities?* The GHQ-12 is largely used to measure psychological distress (Drapeau et al., 2012). Responses

were based on a four-point scale (1 = *less than usual*, 4 = *much more than usual*) and were recoded in a widely used GHQ score (0-0-1-1 format) (McDowell, 2006). The level of psychological distress was derived by summing responses for the twelve items (Alpha = 0.80).

Items from the job content questionnaire (Karasek et al., 1985) were used for psychological demands, skill utilization, decision authority, support from supervisors and support from colleagues. Responses were based on a four-point scale (1 = *strongly disagree*, 4 = *strongly agree*). Psychological demand was assessed using nine items (alpha = 0.73). Skill utilization was measured by six items (alpha = 0.80). The decision authority scale contained three items (alpha = 0.79). The support from supervisor scale (alpha = 0.83) and the support from colleagues scale (alpha = 0.89) were composed of four items each. Physical demands, recognition, job insecurity and career perspectives were derived from the effort-reward imbalance questionnaire (Siegrist, 1996). Responses were based on a four-point scale (1 = *strongly disagree*, 4 = *strongly agree*). Physical demands were based on a single item (*my job is physically demanding*). Recognition was assessed through six items (alpha = 0.82), job insecurity was constructed from two items (alpha = 0.65), and the career perspectives scale contained four items (alpha = 0.69). Interpersonal conflicts at work were assessed through five items of the questionnaire by Harvey et al. (2006) (alpha = 0.80), measured on a four-point scale (1 = *never*, 4 = *very often*). Abusive supervision was assessed with 15 items from Tepper's instrument (alpha = 0.91) (Tepper, 2000). The answers varied on a scale from 1 (*I cannot remember him ever using this behavior with me*) to 5 (*he uses this behavior very often with me*). Working hours represented the number of hours per week that an employee reported spending at work. Irregular schedule, evening hours and night hours were based on a four-point scale (1 = *never*, 4 = *all the time*). Irregular schedule referred to the frequency with which employees work on an irregular or unpredictable schedule. Evening schedule and night schedule referred to their respective frequency.

Single-parent family status was derived from marital status and parental status (with or without children at home). The domestic tasks and caregiving time were measured by the number of hours per week an employee devoted to household labor or to caregiving for a parent. Marital and parental problems were derived from Wheaton's questionnaire (Wheaton, 1994). Marital problems consisted in the addition of four binary items (1 = *yes*, 2 = *no*; 1 = *true*, 2 = *false*; alpha = 0.70). Parental problems were measured by three binary items (1 = *true*, 2 = *false*; alpha = 0.60).

Work-to-family conflict (WFC) and family-to-work conflict (FWC) were assessed with the instrument designed by Gutek, Searle, and Klepa (1991). Four items were used for WFC (alpha = 0.79), and four items for FWC (alpha = 0.74). Responses were given on a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*).

The internal locus of control was obtained from seven items proposed by Pearlin and Schooler (1978) (alpha = 0.84). Responses consisted of a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Self-esteem was built according to the six items of Rosenberg's questionnaire (alpha = 0.87) (Rosenberg, 1979). Responses were based on a five-point scale (1

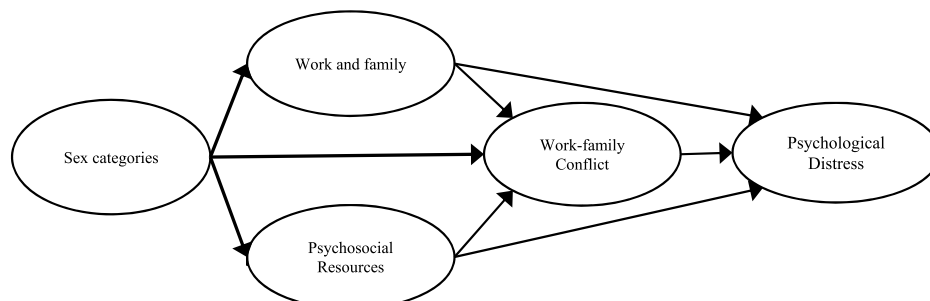


Fig. 1. Gender differential exposure hypothesis.

= strongly disagree, 5 = strongly agree). The social support outside of work was obtained by a binary response (1 = yes, 2 = no) to the following question: *Among family and friends, is there someone you can confide in or talk freely about your problems?*

2.2. Analysis

To test the exposure hypothesis, a multilevel path analysis was performed with Mplus 7.3 software (Muthén & Muthén, 1998–2012). These analyses are adapted for estimating direct and indirect effects simultaneously while taking into account the non-independence of observations due to the cluster sampling (i.e., workers nested in their workplace). As some dependent variables are categorical, the weighted least squares means and variance adjusted (WLSMV) method of estimation was used (Muthén & Muthén, 1998–2012). Chi-square tests, root mean square errors of approximation (RMSEA), comparative fit indices (CFI) and standardized root mean square residuals (SRMR) were used to evaluate the fit of the model. An RMSEA <0.06, a CFI >0.95 and an SRMR <0.08 suggest a good fit of the model with the data (Tabachnick & Fidell, 2013). The significance of the indirect effects was tested using the model constraints method for multilevel models (Muthén & Muthén, 1998–2012). The results from the model constraints method produces standard errors for indirect effects and p-values computed from the z-distribution and allow for the estimation of indirect effects with 95% confidence intervals. Indirect effects are calculated as *indirect* = *a* × *b* where *a* represent the regression coefficient for the relationship between the independent variable and the mediator, and *b* is the regression coefficient for the relationship between the mediator and the dependent variable. The indirect effects were tested only when coefficient *a* and *b* were significant. As age is highly associated with many variables in our

model (Marchand et al., 2015), we controlled for respondent age in the analyses.

3. Results

Descriptive statistics are presented in Table 1. As expected, a multilevel linear regression (not shown) confirmed that women reported a significantly higher level of psychological distress than men (b = 0.446, SE = 0.141, p = 0.002). The work and family experiences of women and men appeared to be significantly different in several respects. Women reported fewer working hours per week, less irregular schedules, less working on evening and night schedules, less skill utilization, less decision authority and fewer physical demands than men. Women were also more likely to be single parents, reported more parental problems and spent more hours on domestic tasks than men. Moreover, women were more likely than men to have social support outside work, and they reported lower levels of self-esteem. There was no significant mean difference between women and men concerning both directions of work-family conflict.

The results of multilevel path model are presented in Table 2. Fit indices showed that the model fits the data well. The relationships between sex categories and work and family stressors and psychosocial resources replicate those reported for the bivariate analysis, with the exception of WFC and FWC. After controlling for all other variables, it was found that being a woman is associated with more WFC and less FWC.

The analyses showed that when work and family stressors, psychosocial resources and work-family conflicts were introduced as mediators, the direct relationship between sex categories and psychological distress was no longer significant (b = -0.058, SE = 0.232, p = 0.802).

Table 1
Descriptive statistics.

	Women (N = 989)		Men (N = 1037)		Total (N = 2026)			Rho (ICC)
	Mean/%	S.D	Mean/%	S.D	Mean/%	S.D	Min/max	
Outcome								
Psychological distress	2.38	2.74	1.94*** ^a	2.47	2.15	2.61	0–12	.01 ^{a,b}
Work								
Working hours (week)	38.70	5.96	41.40**	5.44	40.08	5.85	9–72	.08**
Irregular schedule	1.44	0.74	1.57**	0.82	1.51	0.78	1–4	.17**
Evening schedule	1.39	0.81	1.51**	0.91	1.45	0.87	1–4	.16**
Night schedule	1.17	0.64	1.24*	0.70	1.21	0.67	1–4	.20**
Skill utilization	17.38	3.22	18.07**	3.49	17.73	3.38	6–24	.10**
Decision authority	8.41	1.97	8.84**	2.00	8.63	2.00	3–12	.09**
Psychological demands	23.66	3.89	23.23	3.85	23.44	3.88	10–36	.09**
Physical demands	1.69	0.85	2.27**	0.98	1.99	0.96	1–4	.23**
Support from colleagues	12.55	1.97	12.50	1.93	12.53	1.95	4–16	.03**
Support from supervisors	12.00	2.65	11.88	2.55	11.94	2.60	4–16	.13**
Interpersonal conflict	7.40	2.25	7.36	2.23	7.38	2.24	4–20	.07**
Abusive supervision	18.25	6.01	18.86	6.69	18.57	6.37	15–69	.14**
Recognition	15.77	2.63	15.60	2.63	15.68	2.63	5–20	.06**
Career perspective	10.31	2.36	10.38	2.40	10.35	2.38	4–16	.07**
Job insecurity	3.78	1.30	3.76	1.29	3.77	1.30	2–8	.10**
Family								
Marital problems	0.44	0.90	0.45	0.91	0.44	0.91	0–4	.00
Parental problems	0.24	0.60	0.18**	0.53	0.21	0.57	0–3	.02**
Single-parent family	13%		4%**		8%		0–1	.01
Domestic tasks (hours/week)	5.01	4.67	4.28*	5.04	4.64	4.88	0–30	.00
Caregiving to older parents (hours/week)	0.66	2.05	0.67	2.05	0.67	2.05	0–14	.01
Work-family conflict								
Work-to-family conflict	10.18	3.51	9.64	3.46	9.90	3.49	4–20	.06**
Family-to-work conflict	8.16	2.78	8.20	2.86	8.18	2.82	4–20	.00
Psychosocial resources								
Support outside of work	91%		85%**		88%		0–1	.01
Self-esteem	19.21	3.45	19.58*	3.43	19.40	3.44	2–24	.02
Internal locus of control	19.39	4.42	19.67	4.77	19.54	4.60	0–28	.01
Individual								
Age	41.45	10.73	39.81	10.94	40.61	10.87	17–70	.09*
Sex categories (women)	100%		0%		49%		0–1	.26**

Note: ^a Differences between women and men **p* ≤ 0.05 ***p* ≤ 0.01; ^b Intraclass correlation (ICC) **p* ≤ 0.05 ***p* ≤ 0.01.

Table 2
Multilevel path analysis results.

	Psychological distress	WFC	FWC	Effect of sex category (women) on
Work				
Working hours (week)	0.01	0.09**	-0.03	-2.75**
Irregular schedule	-0.05	0.34**	-0.15	-0.30**
Evening schedule	0.19	0.47**	0.34	-0.23**
Night schedule	-0.19	-0.34	-0.45	-0.17
Skill utilization	-0.05*	0.02	-0.03	-0.83**
Decision authority	-0.08*	0.03	0.00	-0.49**
Psychological demands	0.02	0.25**	0.04*	-0.01
Physical demands	0.00	0.06	0.08	-0.55**
Support from colleagues	0.02	-0.02	-0.04	0.05
Support from supervisor	0.06	0.01	0.08*	0.03
Interpersonal conflict	0.08**	-0.01	0.04	0.04
Abusive supervision	0.03*	0.00	0.01	-0.37
Recognition	-0.02	-0.04	0.01	0.22
Career perspective	-0.01	-0.01	-0.01	-0.13
Job insecurity	0.14*	0.35**	0.10	-0.02
Family				
Marital problems	0.83**	0.21	1.25**	-0.01
Parental problems	-0.14	0.16	-0.08	0.05*
Single-parent family	0.69*	0.10	1.21**	0.56**
Domestic tasks (hours/week)	0.00	0.02	0.02	0.61**
Caregiving parent (hours/week)	-0.01	-0.02	0.08*	-0.06
Psychosocial resources				
Support outside of work	-0.01	-0.27*	0.10	0.33**
Self-esteem	-0.06**	-0.02	-0.04	-0.40*
internal locus of control	-0.13**	-0.17**	-0.14**	-0.30
Work-family conflict				
Work-to-family conflict	0.10**			0.73**
Family-to-work conflict	-0.03			-0.82**
Individual				
Sex (women)	-0.03	0.73**	-0.82**	
Random part				
σ^2 (workplace)	0.07	0.74**		
σ^2 (workers)	4.53**	7.32**	5.48**	
Goodness-of-fit				
χ^2 (dl)	293.921 (df = 136)**			
CFI	0.98			
RMSEA	0.02			
SRMR-within	0.00			
SRMR-between	0.41			

Note: * $p \leq 0.05$ ** $p \leq 0.01$.

Among the gendered stressors and resources, skill utilization, decision authority and self-esteem were associated with a lower level of psychological distress, whereas being a single parent and experiencing work-to-family conflict were associated with a higher level of psychological distress. The indirect effects of sex categories on psychological distress through these gendered stressors were statistically significant, except for the indirect effect through skill utilization (Table 3). Interpersonal conflict at work, abusive supervision, job insecurity, marital problems, and locus of control were also associated with psychological distress, but these stressors were not related to sex categories and therefore, these were not implied in the psychological distress inequality.

Among the gendered stressors, weekly working hours, irregular schedules, and evening schedules were associated with a higher level of

Table 3
Indirect effects of sex categories on psychological distress.

Sex categories (women)	Coefficient	SE
Skill utilization	0.05	0.02
Decision authority	0.04*	0.02
Single-parent family	0.38*	0.15
Self-Esteem	0.02*	0.01
WFC	0.07*	0.03
Working hours (week)-WFC	-0.02**	0.01
Evening schedule-WFC	-0.01*	0.01
Work schedule (irregular)-WFC	-0.01*	0.00
Social support outside of work-WFC	-0.01*	0.00

Note: * $p \leq 0.05$ ** $p \leq 0.01$.

work-to-family conflict (WFC), whereas support outside of work was associated with lower WFC. The indirect effects linking these conditions, sex categories, WFC and psychological distress were all statistically significant (Table 3). Psychological demands, job insecurity and internal locus of control were also associated with WFC without explaining the psychological distress difference between women and men. Finally, psychological demands, support of the supervisor, marital problems, parental caregiving, and being a single parent were associated with FWC. However, FWC was not related to psychological distress. Fig. 2 shows the significant results of differential exposures leading to psychological distress inequality.

4. Discussion

The purpose of this study was to test a comprehensive model of the differential gendered exposure hypothesis to explain the psychological distress inequalities between men and women in a working population. This hypothesis posits that psychological distress inequalities between women and men are a consequence of their unequal exposure to stressors and of their unequal access to resources. Informed by the stress process theory and gender relational theories, our results supported the differential exposure hypothesis, as the relationship between sex categories and psychological distress was entirely mediated by exposure to stressors and access to resources. Gender, as a social structure, determines the constraints and opportunities based on sex categories and therefore contributes to greater psychological distress among women.

This study carried out in Quebec contributes to deepen the understanding of the exposure hypothesis in several ways. First, our study proposes and tests a unique comprehensive model to document the inequalities of psychological distress between men and women in employment. Second, unlike studies that validate the exposure hypothesis with means difference or with hierarchical regressions, this study offers an innovative method by calculating the indirect association between sex categories and psychological distress. This allows to reveal which of the specific exposure difference is associated with the greatest psychological distress.

This study has shown four gendered pathways linking sex categories and psychological distress. First, low decision authority appears to be a gendered stressor involved in higher levels of psychological distress among women. Women still have less decision authority than men, which means that they have less control over the organization of their tasks and fewer opportunities to influence the decision-making process. This finding could be explained by the persistence of gender stereotypes that associate a good leader with masculine characteristics or by a consequence of homosocial reproduction which privileges persons who share the same social characteristics (Powell, 2012; Ridgeway, 2014). These results converge with the large body of literature documenting the effect of lack of decision authority on mental health. Although low decision authority has been suspected as a factor that can contribute to the greater distress of women in employment, this study is among the few to support it empirically and to document the strength of this relationship.

Second, single parenthood was a gendered pathway to psychological

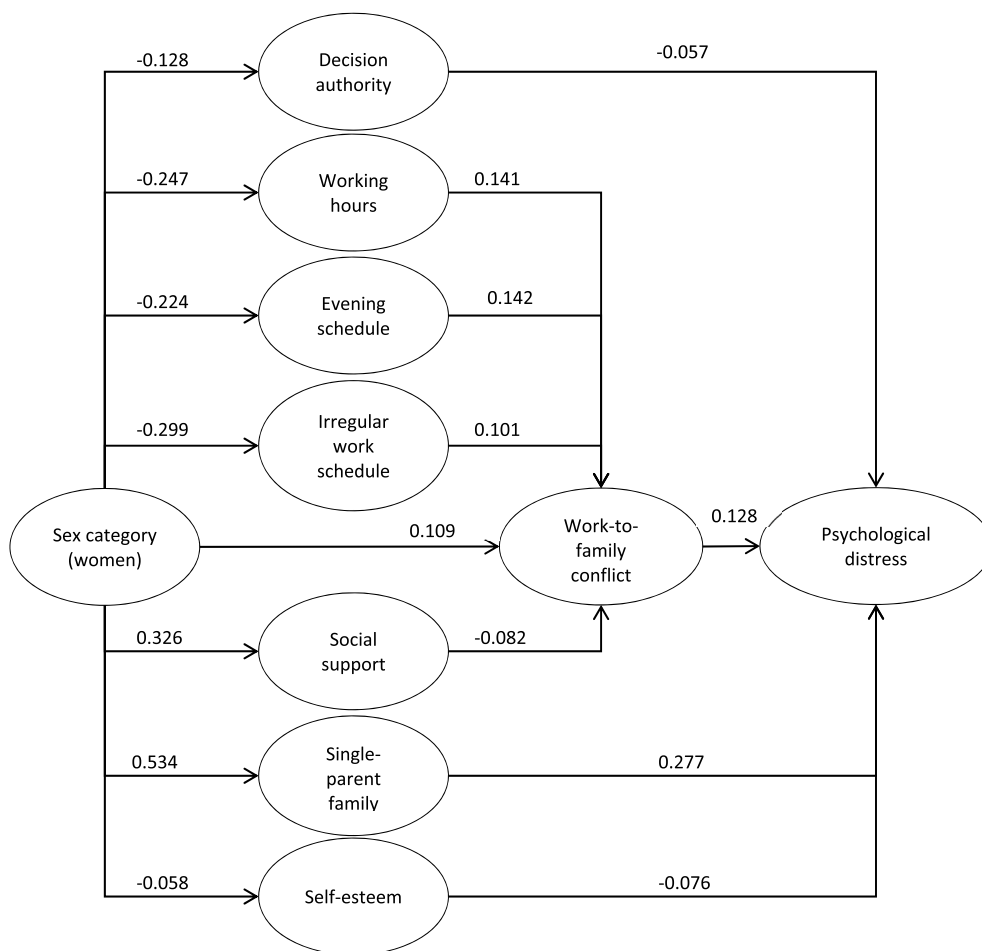


Fig. 2. Standardized effects of gendered pathways to psychological distress. Only statistically significant coefficients are displayed ($p < 0.05$).

distress. In Quebec, the care of children is still closely linked to femininity, and it is mostly women who are responsible for children in cases of separation, despite the increasing contribution of fathers (Houle, Turcotte, & Wendt, 2017). However, it is probably not single parenthood per se that contributes to women’s greater psychological distress but rather the specific conditions associated with this situation, such as economic hardships and isolation (Mirowsky & Ross, 2011; Umberson et al., 2013).

Third, women reported less self-esteem than men, which was associated with greater psychological distress. This may be a consequence of less opportunity to control their work, which may contribute to a negative self-image (Pugliesi, 1995). Increasing the decision authority of working women could directly and indirectly reduce their level of psychological distress through greater self-esteem. An alternative explanation resides in what Connell called “emphasized femininity” (Connell, 1995; Rosenfield & Mouzon, 2013), suggesting that lower self-esteem could be a manifestation of the dominant form of femininity characterized by submission and by the importance given to the care of others. Thus, while a literature review (Simon, 2014) suggested that the differences between men and women regarding psychosocial resources do not contribute to mental health differences, our results offer a more nuanced explanation.

Fourth, the results have also revealed that WFC plays a role in the psychological distress inequality between men and women. Work obligations interfere more with family responsibilities for women than for men, increasing women’s level of psychological distress. As women continue to take up a higher proportion of family responsibilities, working time and responsibilities could become barriers to fulfilling

family obligations, which may be a source of stress (Houle et al., 2017; Mirowsky & Ross, 2011). This stress could lead to work-family guilt, as women face the impossibility of meeting familial social expectations due to work obligations (Glavin, Schieman, & Reid, 2011; Korabik, 2015). Fewer working hours, fewer evening shifts, less irregular schedules and more support outside of work seem to be gendered circumstances associated with a lower level of WFC, which is in turn associated with a lower level of psychological distress among women. Decreasing the investment in work or having support outside of work can be strategies used by women to reduce WFC. However, these strategies could be double-edged if they limit access to positions with a high level of autonomy and thus contribute to more psychological distress. These results make an important contribution relative to the need to include the two directions of work-family conflict and their antecedents in testing the exposure hypothesis.

Our results also revealed that interpersonal conflicts at work, job insecurity and internal locus of control were significantly related to psychological distress, but these factors weren’t associated with the higher women’s psychological distress. The pathways leading to psychological distress differ as those leading to psychological distress inequalities between men and women. These finding echoes Graham’s (2004) central idea that the determinants of health are not the same as the determinants of health inequalities. Our results also showed that women had less opportunity to use their skills, which was linked to a higher level of psychological distress. However, the indirect relationship was not significant, meaning that low skill utilization was a gendered stressor that did not contribute to the higher level of women’s psychological distress. By showing that the exposure difference is not sufficient

to validate the exposure hypothesis, our study also provides a nuanced explanation regarding the literature on gender and health inequality.

Another major contribution of this study was to conceptualize gender as a structural process that shapes access to status and resources among men and women. Most occupational research in mental health continues to confuse the concept of gender with sex categories (Connell, 2012; Springer, Hankivsky, & Bates, 2012). Gender role theories, which suggest that men and women have separate roles due to their differentiated socialization, remain a reference in health studies despite abundant criticism (Connell, 2012). In accordance with gender as a social structure, gender must be captured through multiple mechanisms and pathways (Risman, 2018). In a recent study testing the vulnerability hypothesis on the same sample, we showed that child-related problems among women were associated with significantly more psychological distress through FWC, while the indirect association was negative for self-esteem compared to men (Bilodeau et al., 2019). Thereby, while WFC contribute to the exposure hypothesis, FWC is implied in the vulnerability hypothesis. However, it was not possible in this study to capture the full complexity of gender, even after we had introduced an extended set of potential gendered work and family circumstances and personal resources.

This study has limitations. Because our data are cross-sectional, the results cannot be interpreted causally, given that reverse causation is possible. Workers with higher levels of psychological distress could have evaluated stressors or personal resources more negatively. Further longitudinal studies are therefore needed. It is also important to consider that these results cannot be generalized to the entire working population, as the data come from 63 companies referred by a single insurance company. The sample is, however, very diversified across economic sectors, firm sizes and unionization statuses.

As suggested, it is possible that the results on single parenthood involve specific conditions such as financial difficulty. Our data (not disclosed) does indicate that family income is negatively associated with single parenthood. However, family income variable was not included since it is not associated with mental health and is dependent on marital status. For example, our data shows that employed women have higher family incomes than men. Individual income would certainly make it possible to obtain a more precise appreciation of the differences in exposure. Subsequent studies should also examine more closely the differences in exposure between single-parent women and women in couples.

Considering the response rate of 41% at the company level, selection bias could have been created by encouraging or discouraging more workplaces with workers with many mental health problems to participate in the study. Nevertheless, there is no significant difference in the rates of insurance claims for mental health problems between respondent and non-respondent companies. Moreover, this response rate is higher than that normally found in organizational studies (Baruch & Holtom, 2008).

5. Conclusion

Despite these limitations, this study adds to the understanding of the inequality in psychological distress between men and women by offering an integrative and comprehensive model of the specific pathways implied. To our knowledge, no such comprehensive model on the exposure hypothesis was tested on a working population. The results strengthen the importance of simultaneously considering exposure to the stressors of work, family, work-family conflict and psychosocial resources to better understand the gendered process leading to mental health inequality. Our study also shows that work-to-family conflict plays a significant role directly and indirectly in psychological distress inequality between employed women and men. Companies should work on these factors, as reducing mental health inequalities between men and women might contribute to a significant improvement in the mental health of their workers.

Funding

This study was supported by the Canadian Health Research Institutes (Grant number: 201309MOP-309828-GSH-CFCA-155960).

Role of the funding source

The funding source had no involvement in the collection, analysis and interpretation of data, in the writing and in the decision to submit the article for publication.

Data availability

For confidentiality reasons, the original data cannot be publicly shared.

Ethical

The study protocol was approved by the Ethical Committees of the University of Montreal, McGill University, Laval University, Bishop's University, and Concordia University.

Declaration of competing interest

The authors have no conflict of interest to declare.

CRediT authorship contribution statement

Jaunathan Bilodeau: Conceptualization, Formal analysis, Methodology, Writing - original draft, Writing - review & editing. **Alain Marchand:** Data curation, Funding acquisition, Investigation, Project administration, Supervision, Validation. **Andrée Demers:** Funding acquisition, Supervision, Validation, Writing - review & editing.

Acknowledgements

This study was supported by the Canadian Health Research Institutes (Grant number: 201309MOP-309828-GSH-CFCA-155960), Canada. The authors also thank Marie-Eve Blanc and Julie Dextras-Gauthier for field work.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ssmph.2020.100626>.

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