



Job Stressors and Burnout: Does the Relationship Run Both Ways?

Faraz Vahid Shahidi

May 13, 2021

Acknowledgements

Research Team

John Oudyk (OHCOW)

Peter Smith (IWH)

Monique Gignac (IWH)

Funding Sources



Occupational
Health Clinics
for Ontario
Workers Inc.

Centres de
santé des
travailleurs (ses)
de l'Ontario Inc.



CIHR IRSC

Canadian Institutes of
Health Research Instituts de recherche
en santé du Canada

Psychosocial Job Stressors and Mental Health

- Psychosocial job stressors are associated with a range of adverse mental health outcomes, including higher rates of burnout, depression, anxiety, and suicide.
- For decades, researchers have sought to determine whether the relationship between psychosocial working conditions and mental health is a causal one.
- Recently, the possibility of a dynamic or reciprocal interplay between the psychosocial work environment and mental health has been a major topic of discussion and analysis.

A Reciprocal Relationship?

- Prevailing job stress models (e.g., Demand-Control, Effort-Reward Imbalance) emphasize the role that psychosocial working conditions play in the development and maintenance of mental health problems.
- But there are important reasons to believe that causal relations also run in the other direction; that is, from poor mental health to adverse psychosocial working conditions.



Depression and Earnings

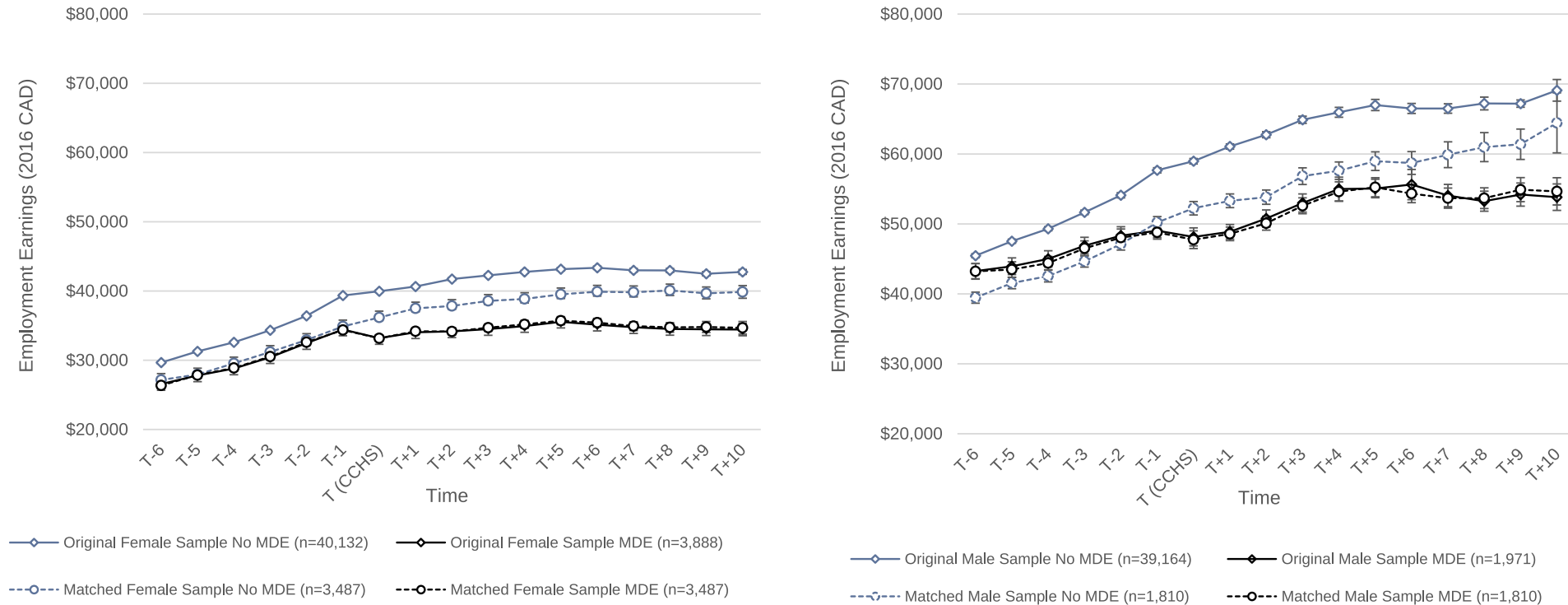


Fig. 2. Average Earnings (2016 CAD Real Dollars) among Original and Propensity Score Matched Samples, Stratified by Gender and MDE Status

Explaining Reverse Causality

- Scholars have proposed two distinct but potentially overlapping hypotheses to explain the presence of reverse effects.
- **The Drift Hypothesis** states that individuals with mental health problems may experience downward selection into lower quality jobs characterized by a stressful work environment.
- **The Gloomy Perception Hypothesis** states that mental health issues can cloud perceptions of the work environment such that, all things being equal, individuals living with mental health problems will report more stressful working conditions than their healthier counterparts.

A Focus on Burnout

Reciprocal Effects Between Job Stressors and Burnout: A Continuous Time Meta-Analysis of Longitudinal Studies

Results from longitudinal studies are ambiguous regarding the direction of effects between job stressors and burnout over time. We meta-analyzed possible reciprocal relations between job stressors and burnout in $k = 48$ longitudinal studies ($N = 26,319$), accounting for variation of time intervals in primary studies by using continuous time meta-analysis. Additionally, we analyzed whether country-level job resources (job control and job support; $k = 31$ European studies, $N = 17,747$) moderated the effect of job stressors on burnout (stressor-effect) and the effect of burnout on job stressors (strain-effect). Further, we analyzed the replicability of the primary studies by assessing between-study heterogeneity, publication bias, and statistical power. Reciprocal effects between job stressors and burnout exist. The stressor-effect is small, whereas the strain-effect is larger and moderated by job control and job support. Analyses of the different burnout symptoms (emotional) exhaustion and depersonalization/cynicism demonstrated that reciprocal relations between emotional exhaustion and job stressors exist, but depersonalization/cynicism is not directly related to job stressors. Between-study heterogeneity was comparable with other psychological studies, whereas statistical power of primary studies was comparatively large. Conclusions are limited because few primary studies used time intervals of less than 12 months, more than two measurement occasions, and objective measures of stressors. Overall, results imply the need for extended job stress models and new job stress interventions that help employees cope with burnout symptoms.

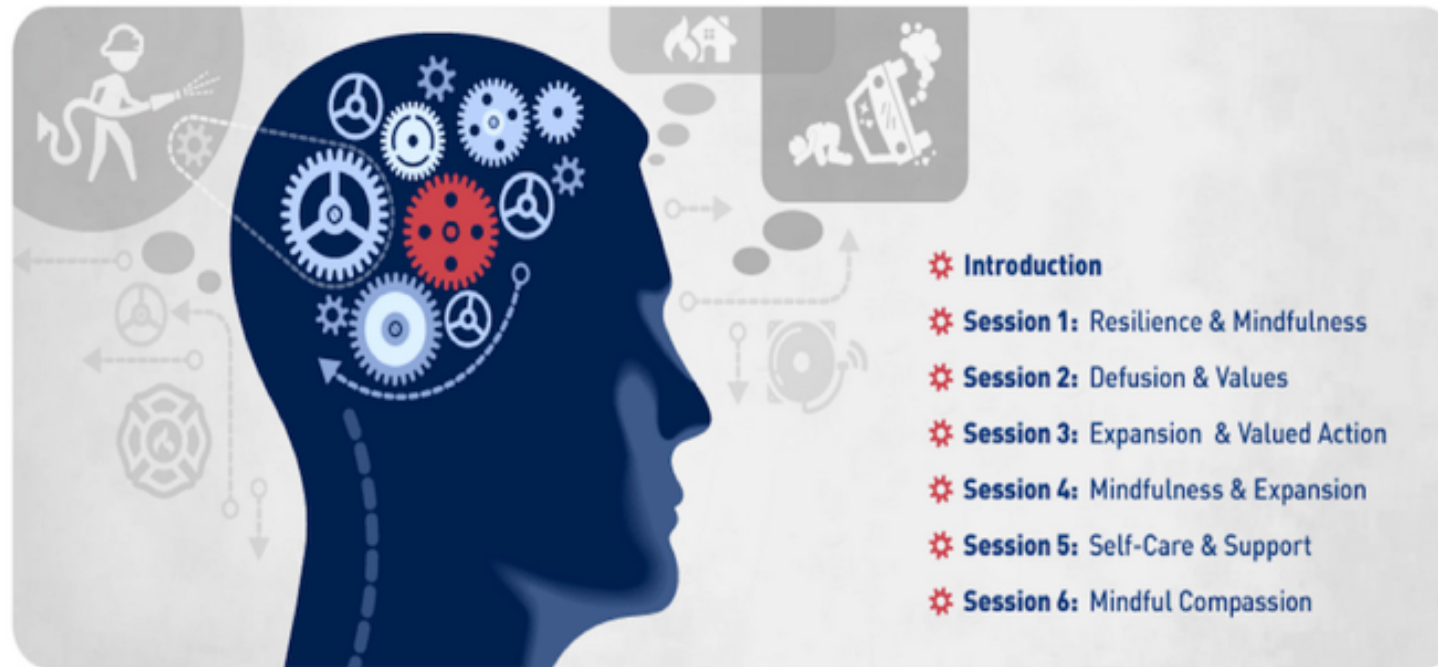
Public Significance Statement

This meta-analysis reveals that job stressors and burnout mutually affect each other, with burnout increasing job stressors much more than vice versa. Employees having burnout symptoms should be provided with appropriate resources to avoid increasing levels of job stressors to stop a possible vicious circle between job stressors and burnout and, therefore, prevent the development of critical levels of burnout.

“The results of the new study challenge the common assumption that work stress is the driving force behind burnout. [...] Findings from the new study show that work stress and burnout are mutually reinforcing. However, contrary to popular belief, burnout has a much greater impact on work stress than vice versa.” (Forbes)

Is “Resilience” the Solution?

Resilience@Work (RAW) Mindfulness Program



Study Questions

1. Is there a bidirectional relationship between psychosocial job stressors and burnout in the working population of Canada?
2. Assuming the relationship is bidirectional, is the relationship stronger in one direction than the other?
3. Are the job stressors implicated in the forward direction the same as those implicated in the reverse direction?

Data Source

Design:

Online survey administered in 2016 and 2019

Eligibility:

At least 18 years of age

Working at an organization with 5 or more employees

Comfortable completing a questionnaire in English or French

Recruitment:

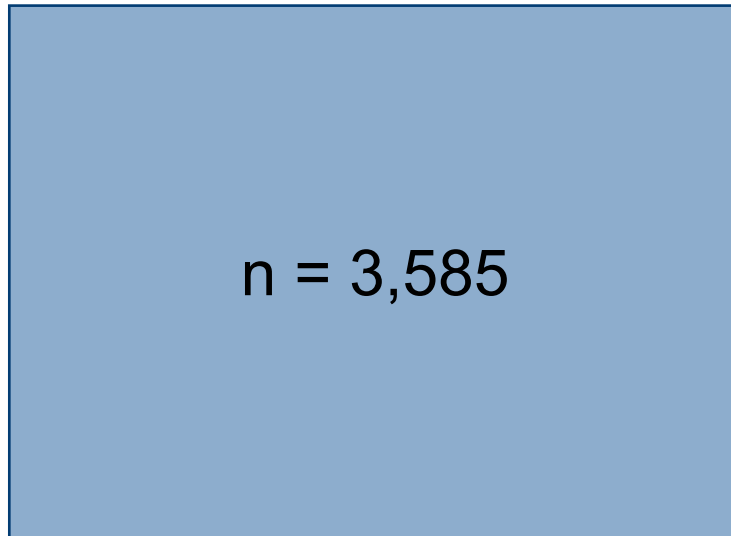
National panel of 100,000 volunteer respondents

Broadly representative of the Canadian population

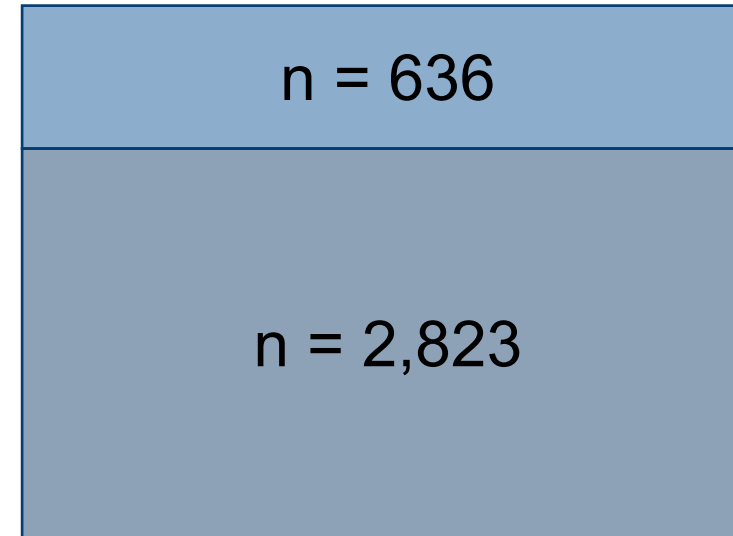
Achieved a response rate of 12%

Data Source

2016 Cycle



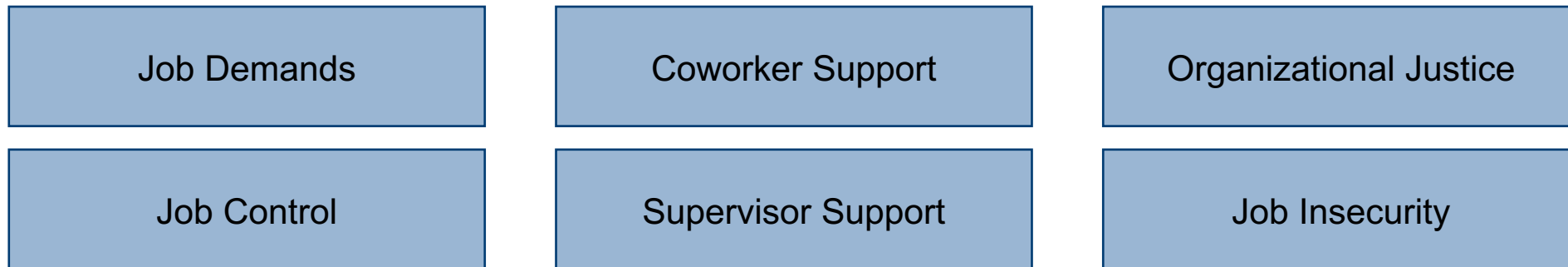
2019 Cycle



Key Measures: Psychosocial Work Environment

Questions were adapted from standardized items in the **Copenhagen Psychosocial Questionnaire (COPSOQ)**, a widely validated tool for the assessment of psychosocial risk factors at work.

We grouped 31 items measuring 15 dimensions of the psychosocial work environment into **six overarching job stressors**.



Key Measures: Burnout

Questions were adapted from the **Copenhagen Burnout Inventory**, which is designed to capture general symptoms of exhaustion and fatigue in the working population.

- *How often have you felt worn out?*
- *How often have you been emotionally exhausted?*
- *How often have you been physically exhausted?*
- *How often have you felt tired?*

Other Variables

All results are statistically adjusted for the following characteristics:

- Age
- Gender
- Region
- Education
- Employment Status
- Occupational Position
- Shift Type
- Industry
- Firm Size

Statistical Analyses

We used two-wave cross-lagged panel models to examine bidirectional associations between job stressors and burnout, exploiting the longitudinal structure of the data to control for baseline values of these constructs.

Controlling for X and Y at baseline...

1. Does X at Time 1 predict Y at Time 2?
2. Does Y at Time 1 predict X at Time 2?

This enabled us to test the relationship between job stressors and burnout in both directions, and **adjudicate between forward and reverse causation.**

Hypotheses

H₀: Stability (or Null)



H₁: Forward Causality



H₂: Reverse Causality

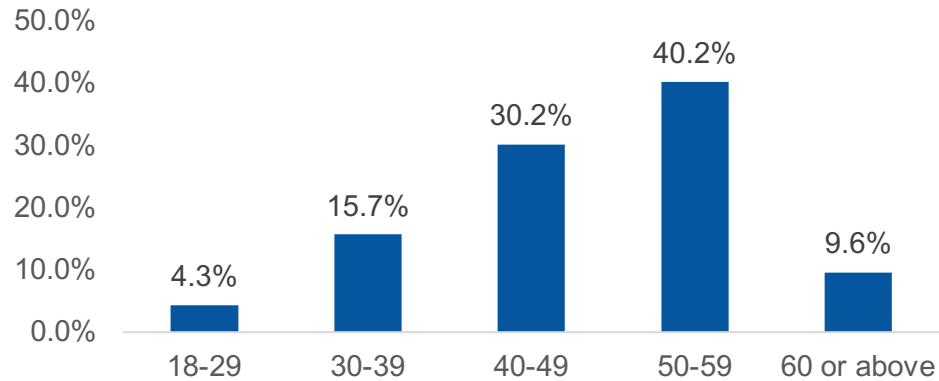


H₃: Reciprocal Causality

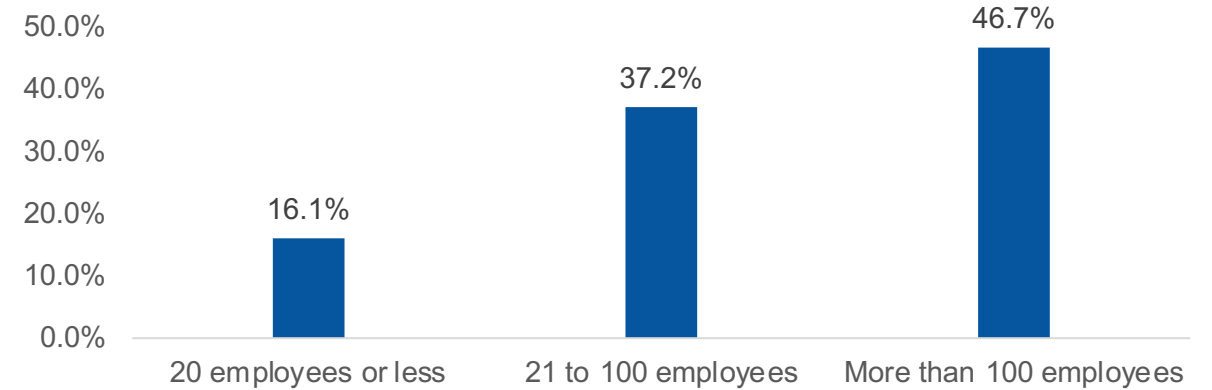


Study Sample (n = 453)

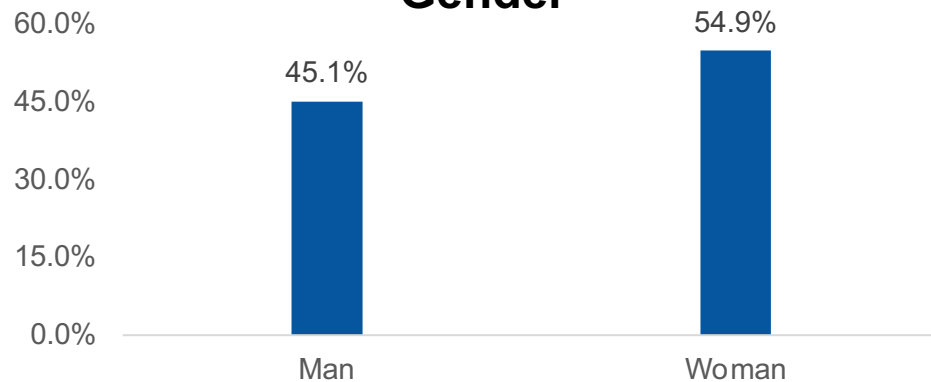
Age



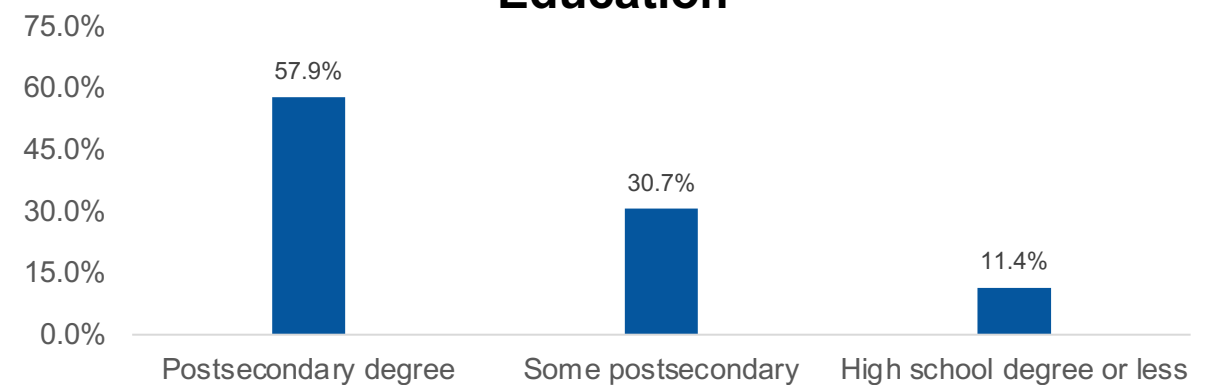
Firm Size



Gender



Education



Results: Stability

We did not observe lagged associations between coworker support and burnout in either the forward or reverse direction, supporting the **Null Hypothesis**.

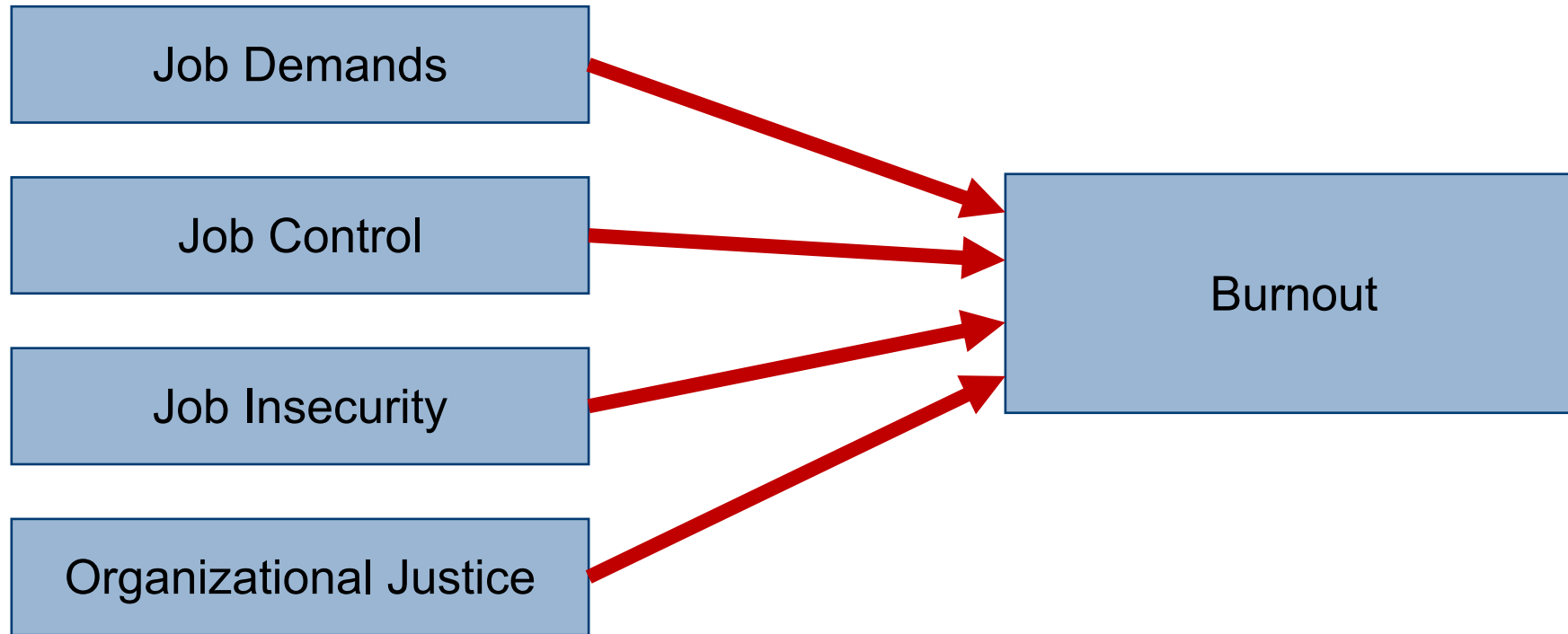


Coworker Support

Burnout

Results: Forward Causality

We found consistent evidence in support of the **Forward Causation Hypothesis**: higher job demands, lower job control, higher job insecurity, and lower organizational justice at Time 1 predicted higher burnout at Time 2.



Results: Reverse Causality

Evidence in support of the **Reverse Causation Hypothesis** was also observed, albeit to a much more limited extent: higher burnout at Time 1 was associated with lower supervisor support at Time 2.



Results: Reciprocal Causality

We did not observe bidirectional associations between burnout and any single dimension of the psychosocial work environment. For any single job stressor, the association ran in either the forward or reverse direction – but never both.

Put differently, the job factors involved in the forward direction (from stressor to burnout) appear to differ from those involved in reverse direction (from burnout to stressor).

Summary of Findings

- Taken together, these results provide only limited support for the notion of a bidirectional, reciprocal relationship between the psychosocial work environment and burnout – at least in the general working population of Canada.
- On balance, our findings suggests that the psychosocial work environment is causally predominant, such that stress at work is better understood as a cause rather than a consequence of burnout.
- This is consistent with prevailing job stress theories, which emphasize the role that adverse psychosocial working conditions play in the development and maintenance of mental health problems.

Limitations

- A more robust examination of causal pathways between the psychosocial work environment and burnout would require additional waves of data – and data of this nature is lacking in Canada.
- The survey did not collect information on several demographic and socioeconomic characteristics of interest that might contribute to baseline differences in psychosocial job quality and burnout (e.g., income, race, and immigration status).
- There was a high rate of non-response to the survey – approximately 89% of respondents did not accept our invitation to participate, raising concerns about the representativeness of the sample.

Key Messages

- **It's not you, it's the job!** Job stress is the driving force behind burnout in the general working population, rather than the other way around.
- **Focus upstream.** To prevent a downward spiral between job stress and burnout, interventions should focus on improving the work environment, and not merely on instructing workers how to cope with burnout and better manage the symptoms of stress.

Thank you

Faraz Vahid Shahidi

Associate Scientist



fshahidi@iwh.on.ca



iwhresearch

Shahidi FV, Smith P, Oudyk J, Gignac M. Longitudinal reciprocal relationships between the psychosocial work environment and burnout. *Journal of Occupational and Environmental Medicine*. 2022;64(3):226-235.

Assessing the Psychosocial Work Environment

TABLE 1. Dimensions of the Psychosocial Work Environment: Canadian National Psychosocial Work Environment Survey

Psychosocial Work Factor	COPSOQ Dimension	Items	Sample Question	Mean	SD
Job demands	Quantitative demands	2	Do you get behind with your work?	47.5	23.6
	Work pace	2	Do you have to work very fast?	60.0	22.0
	Emotional demands	3	Is your work emotionally demanding?	47.9	25.9
	Role conflicts	3	Are contradictory demands placed on you at work?	47.8	26.1
Job control	Influence at work	2	Can you influence the amount of work assigned to you?	53.4	25.5
Job insecurity	Possibilities for development	3	Can you use your skills or expertise in your work?	29.7	21.5
	Job insecurity	1	Are you worried about becoming unemployed?	40.0	30.4
Coworker support	Sense of community	1	Is there a good atmosphere between you and your colleagues?	17.5	17.2
	Support from colleagues	1	How often could you get help and support from your colleagues, if needed?	23.2	20.3
Supervisor support	Quality of leadership	3	To what extent would you say your immediate superior is good at work planning?	49.0	28.6
	Support from supervisors	2	How often could you get help and support from your immediate superior, if needed?	34.2	29.8
Organizational justice	Organizational justice	2	Are conflicts resolved in a fair way?	49.6	26.4
	Predictability	2	Are you informed well in advance about important decisions, changes, or plans for the future?	38.2	26.1
	Recognition	2	Is your work recognized and appreciated by the management?	45.2	25.8
	Vertical trust	2	Can the employees trust the information that comes from the management?	41.0	28.8

Higher scores indicate more negative psychosocial work exposure levels. SD, standard deviation.