



Survey Savvy - Choosing the right Tool

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Why measure psychosocial factors in the workplace?



Background:

- **SPR survey of Ontario JH&SC's (1985-86)** – workplace stress was one of the main issues JH&SC's were struggling with
- For **USW H&S conferences** since the 1980's, locals were asked to list their major H&S issues, stress was always one of the top 3
- Mental illness is linked to **more lost work days than any other chronic condition**, costing the Canadian economy **\$51 billion a year** in lost productivity, a report from the Centre for Addiction and Mental Health (CAMH)
- Shain & Nassar (2009) noted that annually \$3-11 billion of these costs to society and the workplace, **could be prevented** by changes in the workplace

Sources: Shain & Nassar (2009), "Stress at Work, Mental Injury and the Law in Canada: A Discussion Paper for the Mental Health Commission of Canada"



Perspectives/Stages/Focus:



early: violence prevention (Bill C65, Bill 132), regulatory compliance

awareness: mental health/stigma reduction (affect attitudes)

risk assessment/management: evaluate and manage psychosocial factors

organizational development: optimization/ innovation





Prevention Framework

prevention level	intervention levels				
	individual	group (dept/shift/team)	organizational	economic sector	societal
primary (1°) prevention (at the source)	coping and appraisal skills (resiliency)	same as organizational but more personal	changing the culture, climate, work structure & organization	inherent stressors associated with the type of work	recognition – CSA standard; legislation; attitudes
secondary (2°) prevention (along the path)	wellness, relaxation techniques (Mindfulness)	same as organizational but operationalized	awareness, Mental Health 1 st Aid, screening (surveys)	training, debriefing procedures, support activities	media profile, legislation, enforcement, early detection services
tertiary (3°) prevention (at the worker)	therapy, counselling, medication, support	same as organizational but with more personal supports	EAP, WSIB/WSIAT recognition, Return to Work	societal recognition of inherent risk and appropriate supports	availability of mental health support services, legislation & enforcement



Tracking the Perfect Legal Storm (Shain, 2010, [Weathering the ..., 2014])

- Labour relations law
- Employment standards
- Human rights legislation
- Law of torts (negligence)
- OH&S law (violence & harassment)
- Workers' compensation changes (BC & Ont)
- Awards up 700% over that last 5 years



... legal opinion (22/10/2013) that CSA standard sets the legal criteria for a psychologically safe system of work

... May/17 Martin Shain called for the standard to be recognized in legislation.

<http://www.mentalhealthcommission.ca/English/node/506?terminal=30>



Law, policy and workplace mental health in Canada



Katherine Lippel
CRC in OHS Law
University of Ottawa



4th Annual Canadian Congress for research on
Mental Health and addiction in the workplace,
Toronto, October 28th-30th, 2009 <http://www.longwoods.com/content/22408>





Legal Evolution in Canada

COMMENTARY

Access to Workers' Compensation Benefits and Other Legal Protections for Work-related Mental Health Problems: A Canadian Overview

Katherine Lippel, LL.L., LL.M.,¹ Anette Sikka, BA, LL.B.²

ABSTRACT

This article reports on a study of the legal and policy framework governing access, in Canada, to workers' compensation benefits for workers who are work disabled because of mental health problems attributed to stressful working conditions and events. It also provides a brief description of legislation regulating psychological harassment in Quebec and Saskatchewan.

Applying classic legal methodology, the article examines the legal situation in Canada, relying on federal and provincial legislation and case law. While many of the jurisdictions studied explicitly restrict compensability to the consequences of traumatic incidents, application of this legislation is very different from one province to the next. In some provinces, legal exclusions are applied emphatically, whereas in others the workers' compensation appeal tribunals interpret the legislative exclusions much more narrowly, allowing for some access to compensation despite the legislative exclusions. Other provinces have no such exclusions and accept claims for both acute and chronic stress, although access to compensation remains more difficult for claimants with mental health problems than for those who are physically injured, regardless of where they live.

The article concludes by offering an analysis of the consequences of the current situation from a public policy and public health perspective, notably underlining the negative consequences, particularly for women, of current workers' compensation policy in most Canadian provinces.

Key words: Workers' compensation; psychosocial risk factors; mental health problems; psychological harassment; legislation

La traduction du résumé se trouve à la fin de l'article.

Can J Public Health 2010;101(Suppl.1):S16-S22.

journal.cpha.ca/index.php/cjph/article/download/2438/2158



Bill 127 (Apr 27/17): Bill 177 (Nov 14/17)

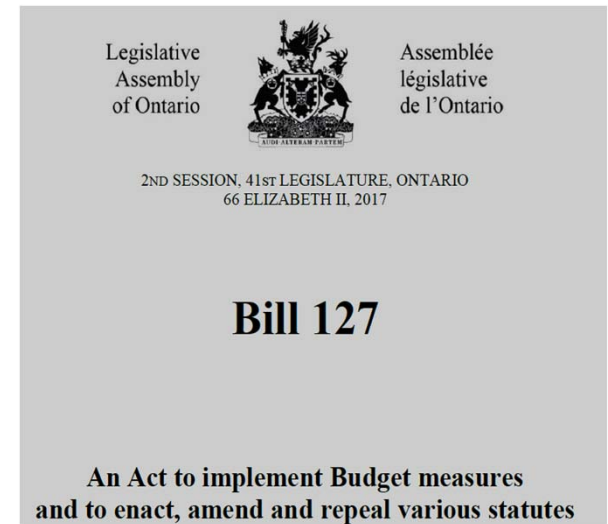
Subsections 13 (4) and (5) of the *Workplace Safety and Insurance Act, 1997* are repealed and the following substituted:

Mental stress

(4) Subject to subsection (5), a worker is entitled to benefits under the insurance plan for chronic or traumatic mental stress arising out of and in the course of the worker's employment.

Same, exception

(5) A worker is not entitled to benefits for mental stress caused by decisions or actions of the worker's employer relating to the worker's employment, including a decision to change the work to be performed or the working conditions, to discipline the worker or to terminate the employment.



Bill 177 Changes: Any worker whose mental stress occurred **on or after April 29, 2014** and has not filed a claim prior to January 1, 2018 may file a claim and have it adjudicated under the new mental stress provision.

Source: Legislative Assembly of Ontario Bill 127 - http://ontla.on.ca/web/bills/bills_detail.do?locale=en&BillID=4778&detailPage=bills_detail_the
Bill 177:- http://www.ontla.on.ca/bills/bills-files/41_Parliament/Session2/b177_e.pdf



Burnout syndrome as an occupational disease in the European Union: an exploratory study

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Gerard LASFARGUES⁸, Magnus SVARTENGREN⁹, Marek VARGA¹⁰,
Claudio COLOSIO¹¹ and Daniela PELCLOVA^{1*}

Lastovkova et al.,
“Burnout
syndrome as an
occupational
disease in the
European Union:
an exploratory
study.”, Ind
Health 56:160-
165 (2018).

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Published online in J-STAGE November 3, 2017

Abstract: The risk of psychological disorders influencing the health of workers increases in accordance with growing requirements on employees across various professions. This study aimed to compare approaches to the burnout syndrome in European countries. A questionnaire focusing on stress-related occupational diseases was distributed to national experts of 28 European Union countries. A total of 23 countries responded. In 9 countries (Denmark, Estonia, France, Hungary, Latvia, Netherlands, Portugal, Slovakia and Sweden) burnout syndrome may be acknowledged as an occupational disease. Latvia has burnout syndrome explicitly included on the List of ODs. Compensation for burnout syndrome has been awarded in Denmark, France, Latvia, Portugal and Sweden. Only in 39% of the countries a possibility to acknowledge burnout syndrome as an occupational disease exists, with most of compensated cases only occurring in recent years. New systems to collect data on suspected cases have been developed reflecting the growing recognition of the impact of the psychosocial work environment. In agreement with the EU legislation, all EU countries in the study have an action plan to prevent stress at the workplace.





EU Directive 89/391/EEC

2. The employer shall implement the measures referred to in the first subparagraph of paragraph 1 on the basis of the following general principles of prevention:

(g) developing a coherent overall prevention policy which covers technology, *organization of work*, working conditions, *social relationships* and the influence of factors related to the working environment;

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:01989L0391-20081211:EN:NOT>



EU Context



- European Framework Directive on Health and Safety at Work (89/391/EEC), which came into force on January 1st **1993** was interpreted as including psychosocial risks as a part of the workplace risk assessment
- European Parliament's Resolution A4-0050/99 (February 25, **1999**) specified the goals of workplace well-being to include psychosocial aspects
- These were generic requirements (i.e. “assess risks including psychosocial”) without specific performance evaluations (similar to our current state of affairs with violence & harassment policies) and were largely ignored or only paid lip-service to
- Within the **last 5-10 years** EU members have been passing very specific regulations requirement the measurement of psychosocial hazards and some even so far as requiring the quantitative demonstration of the effect of interventions
- EU **2012** enforcement “blitz” on psychosocial risk assessment



HSE (UK) online survey:



 <http://www.hse.gov.uk/stress/standards/notesindicatortool.htm>

Notes on HSE Management Standards Indicator Tool

The HSE Management Standards Indicator Tool should be used in conjunction with the HSE Management Standards Indicator Tool User Manual. The HSE Management Standards Indicator Tool is also available in a number of different languages on [HSE's Management Standards website](#).

If you plan to use the HSE Management Standards Indicator Tool as part of a customised 'pick and mix' approach:

There are a number of ways in which you may wish to incorporate some of the Management Standards survey tools into your own customised approach.

Some of these are listed below:

- **Incorporating HSE Management Standards Indicator Tool into your own survey:** You may wish to incorporate the HSE Management Standards Indicator Tool into your own survey. In this case, we would suggest that you keep the question wording and scoring system the same and the items in the same order and use the HSE Management Standards Analysis Tool to analyse your results. If you use other software to carry out a preliminary analysis of the data, please note that the scoring system is reversed for some items.
- **Using online survey tools:** You may wish to use the HSE Management Standards Indicator Tool in conjunction with a commercially available survey tool to conduct an online survey. Once you have completed the

Origin of the HSE tools



- In 2001 the HSE published HSG 218 Tackling work-related stress
- After work one day, **Peter Kelly** and his work colleagues went out for a beer and literally sketched out the factors on a paper napkin
- They identified 7 key factors
- Published psychometric properties
- Put survey online in 2008 with a spreadsheet for analysis
- Used both population comparison data & workplace comparison data
- Was voluntary for years but now contemplating mandatory use



HSE tool has 7 dimensions:

Demands

Control

Support (peer & management)

Relationships

Role clarity

Workplace change



Study published on the validity of the HSE Management Standards Indicator Tool

- Edwards et al. (2008) “Psychometric Analysis of the UK Health & Safety Executive’s Management Standards”

https://www.researchgate.net/publication/48989953_Psychometric_Analysis_of_the_UK_Health_Safety_Executive%27s_Management_Standards_Work-Related_Stress_Indicator_Tool

“Data collected from 39 UK organizations (N = 26,382) was used to perform a first-order Confirmatory Factor Analysis (CFA) on the original 35-item seven-factor measurement scale. The results showed an acceptable fit to the data for the instrument.”

“A second-order CFA was also performed to test if the Indicator Tool contains a higher order uni-dimensional measure of work-related stress. These findings also revealed an acceptable fit to the data, suggesting that it may be possible to derive a single measure of work-related stress.”



<https://www.workpositive.ie/>

GET STARTED / LOGIN

WORKPOSITIVE^{CI}

1. PREPARE 2. MEASURE 3. ACTION PLAN 4. REVIEW Q

Positively supporting employee engagement and wellbeing

Work Positive^{CI} is a FREE State and stakeholder supported psychosocial risk management process that helps organisations identify ways to improve employee wellbeing.

Australian experience:



- “Work-related stress describes the physical, mental, emotional and behavioural reactions of employees who perceive that their work demands exceed their abilities and/or resources to cope and do their work.”
- “Work-related mental injury resulting in psychological harm is the second most common cause of workers' compensation claims in Australia, after manual handling. It currently accounts for 11 per cent of workers' compensation claims in Victoria, and one of the leading causes is work-related stress.”

<http://www.worksafe.vic.gov.au/safety-and-prevention/health-and-safety-topics/work-related-stress>



People at Work:



<https://www.worksafe.qld.gov.au/injury-prevention-safety/mental-health-at-work/tools-and-resources/people-at-work/tools-and-resources>

People at Work tools and resources



A number of tools and resources are available to assist your organisation to implement People at Work. These tools and resources are free to use and share with others.

People at Work survey and reporting

- [People at Work survey](#) (PDF, 683.73 KB) – a risk assessment tool which measures psychological risks for staff
- [People at Work implementation guide](#) (PDF, 723 KB) – information on how to successfully implement People at Work in your organisation
- [People at Work reporting spreadsheet template](#) (XLSX, 3589.38 KB) – a template to help with reporting on the results of the survey which includes pre-formatted data sheets and dashboards.
- [People at Work reporting spreadsheet example](#) (XLSX, 3605.38 KB) – an example of a completed spreadsheet

People at Work guidance materials

- [What is the People at Work survey?](#) (PDF, 526.4 KB) – a fact sheet that explains what People at Work is about
- [People at Work focus group guide](#) (PDF, 923.37 KB) – a guide to undertaking focus groups which are a useful way to follow up survey results to further understand findings and determine priority areas for action
- [People at Work action planning guide](#) (PDF, 975.34 KB) – a guide to developing an action plan which outlines strategies and controls your organisation will implement to manage



Healthy Work Campaign



<https://healthywork.org/>





Healthy Work Campaign

Goals

To achieve the Healthy Work Campaign (HWC) Mission to improve job quality and health, the campaign team and partners seek to:

1. EDUCATE

Educate working people and other stakeholders (employers, labor leaders, regulators, journalists, educators, and others) about how work in the U.S. impacts our psychological and physical health, as well as the social and financial costs to our organizations, communities, and nation. We also want all stakeholders to learn about the many ways to promote healthy work.

2. ASSESS

Assess the workplace for unhealthy work stressors, using online, user-friendly tools available to both individuals and organizations. The HWC is developing a **Healthy Work Survey**, an online, work stress assessment tool that will provide individuals or organizations with a detailed and tailored report about their unique levels of work stress.

3. EQUIP

Equip workers and organizations with **Healthy Work Tools** including interventions that can be used to promote healthy work, healthy organizations and healthy people.

4. INSPIRE ACTION

Inspire action from all stakeholders—to share the message about healthy work, implement organizational change, and participate collectively to promote healthy work throughout the U.S.

<https://healthywork.org/mission/#goals>





Endorsement of StressAssess

ENTER EMAIL

JOIN!



HEALTHY WORK CAMPAIGN

INDIVIDUALS ▾ EMPLOYERS ▾ **UNIONS & WORKER ADVOCATES ▾** MISSION ▾ RESOURCES ▾ TAKE ACTION ▾ 🔍

Healthy Work Survey

FOR UNIONS & WORKER ADVOCATES

StressAssess 

TAKE THE SURVEY

Plan to create their own survey based on the NIOSH Quality of Work Life (QWL) survey

We recommend unions & worker advocacy groups use **StressAssess – workplace edition**, a survey designed by labor and occupational health experts in Canada to assess sources of stress at work ([work stressors](#)). When a group of workers complete the survey, StressAssess will provide a free, online report with the aggregated, anonymous results, and that suggests solutions.



[Research studies](#) show that when we experience chronic stress at work, it takes a toll on our bodies and minds. The stress we experience is not just in our heads, it is caused by policies, practices and demands in the workplace. Eventually, chronic exposure to work stressors can lead to

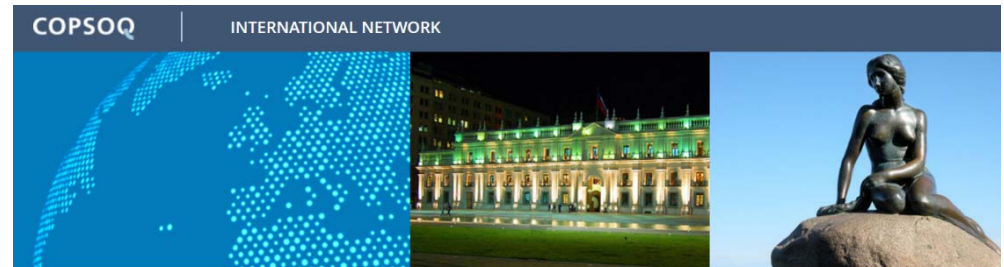
<https://healthywork.org/unions-worker-advocates/healthy-work-survey-unions/>



South America



- Attending a meeting of the COPSOQ International Network in Chile we heard about legal requirements to conduct psychosocial risk assessments in Argentina, Brazil, Peru and Chile
- In Chile the COPSOQ survey must be used to conduct the risk assessment



Welcome to COPSOQ
international network

[Aims and activities](#)

[Steering Committee](#)

[Network Members](#)

6th International COPSOQ
Workshop Santiago de Chile /RCH
2017





Mental Health
Commission
of Canada

Commission de
la santé mentale
du Canada

Public discussion:



Mental Health
First Aid Canada



Canadian Mental
Health Association
Mental health for all

CCOHS 
Canadian Centre for Occupational Health and Safety



<https://www.ccohs.ca/topics/wellness/mentalhealth/>

Recognized H&S hazards (CSA Z1000):

- Safety hazards
- Chemical hazards
- Physical hazards (noise, lighting, radiation, etc.)
- Biological hazards
- Ergonomic hazards
- **Psychosocial hazards**



CAN/CSA-Z1000-14
National Standard of Canada
(approved September 2015)



Standards Council of Canada
Conseil canadien des normes

REVISED SEPTEMBER 2015



CSA Standard Z1003-13

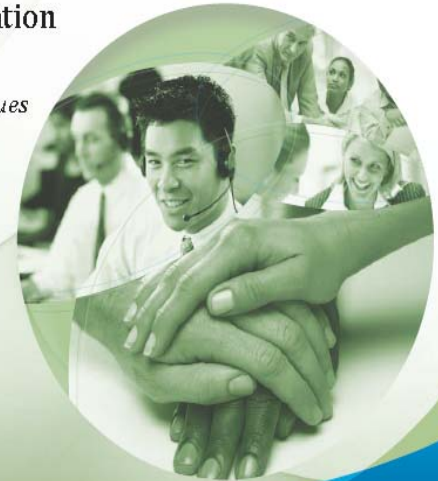


CAN/CSA-Z1003-13/BNQ 9700-803/2013
National Standard of Canada

Psychological health and safety in the workplace — Prevention, promotion, and guidance to staged implementation

Disponible en français

*Santé et sécurité psychologiques
en milieu de travail —
Prévention, promotion et lignes
directrices pour une mise en
œuvre par étapes*



http://shop.csa.ca/en/canada/occupational-health-and-safety-management/canca-z1003-13bnq-9700-8032013/invnt/z10032013/?utm_source=redirect&utm_medium=vanity&utm_content=folder&utm_campaign=z1003

Commissioned by the
Mental Health Commission of Canada





#ISO45001

Preventing accidents and keeping people safe and healthy at work, find out how International Standards can help employers meet their responsibilities.

<https://spotlight.iso.org/iso45001>



Clause 6.1.2.1 Hazard identification

- Hazard identification should consider the different types of hazards in the workplace, including:
 - Physical (e.g. slips, trips and falls, entanglement, noise, vibration, harmful energy sources);
 - Chemical (e.g. inhalation, contact with or ingestion of chemicals);
 - Biological (e.g. contact with allergens or pathogens such as bacteria or viruses);
 - Psychosocial (e.g. threat of physical violence, bullying or intimidation);





Stavroula Leka

ICS



Norma McCormick

**Draft (#5) for public
comment expected to be
released Mar-Apr 2020**

ISO/WD 45003

Occupational health and safety management — Psychological Health and Safety in the Workplace — Guidelines

LIFE CYCLE

A standard is reviewed every 5 years



<https://www.iso.org/standard/64283.html>



Other related concepts/tools:

- Job satisfaction/employee engagement surveys
- Workplace climate/culture evaluations
- Violence & harassment surveys
- Social capital assessment (organizational development)
 - “the networks of relationships among people who live and work in a particular society, enabling that society *[organization]* to function effectively.”
- Mental Health First Aid awareness/stigma reduction
- PTSD prevention <http://www.firstrespondersfirst.ca/>
- Bell’s “Let’s Talk”



Two question we get asked:

1. Does your survey measure the CSA 13 factors?
2. Is it a validated survey?



The 13 Psychosocial Factors:

Psychological
& social
support

Organizational
culture

Clear
leadership &
expectations

Civility and
respect

Psychological
demands

Growth and
development

Recognition
and reward

Involvement
and influence

Workload
management

Engagement

Work/life
balance

Psychological
protection

Protection of
physical
safety

(CAN/CSA-Z1003-13/BNQ 9700-803/2013 - Psychological health and safety in the workplace - Prevention, promotion, and guidance to staged implementation; page 8.)



Where do these 13 Factors come from?



Key factors mentioned in CSA Z1003

“From this perspective, law and science agree that risks to mental health are more likely to arise and contribute to a psychologically unsafe workplace in the following situations:

- a) **Job demands** and requirements of **effort**: Job demands consistently and chronically exceed worker skill levels or exploit them beyond what would be considered reasonable for a particular type of undertaking, or where work is distributed inequitably.
- b) **Job control** or **influence**: Discretion over the means, manner, and methods of their work (including “voice” or the perceived freedom to express views or feelings appropriate to the situation or context) is withheld from workers by choice rather than because of the intrinsic nature of the work.
- c) **Reward**: Praise, recognition, acknowledgement, and credit are withheld from workers for no good business reasons.
- d) **Fairness**: There is consistent failure or refusal to recognize and accommodate the reasonable needs, rights, and claims of workers. Perceptions of such failure can arise from feelings that decisions are made without attention to due process.
- e) **Support**: Support with regard to advice, direction, planning, and provision of technical and practical resources and information (to the extent that they are available within the organization) is withheld from workers by choice rather than because of some systematic constraint within the organization.”



Job Demand-Control model (JDC – Karasek, 1979)



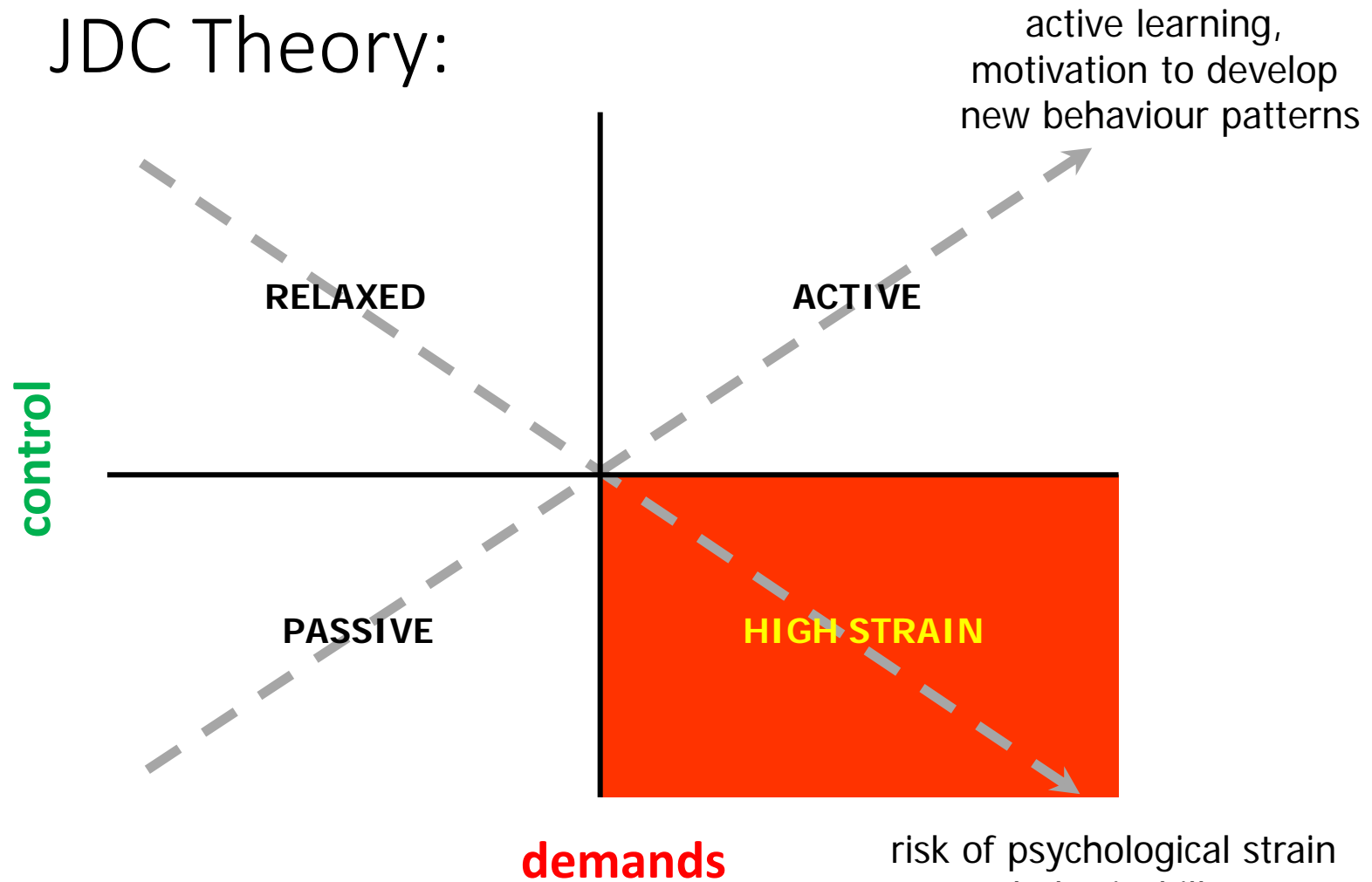
“In the JDC model there are two different hypotheses, the strain hypothesis and the learning hypothesis.”

- strain hypothesis
- learning hypothesis

“In the eighties the model expanded with a social dimension. The Job Demand-Control-**Support** (JDCS) model acknowledges that social support is vital for the employee when coping with different demands at work.”



JDC Theory:



Source: <http://www.workhealth.org/strain/jsdef2.html>

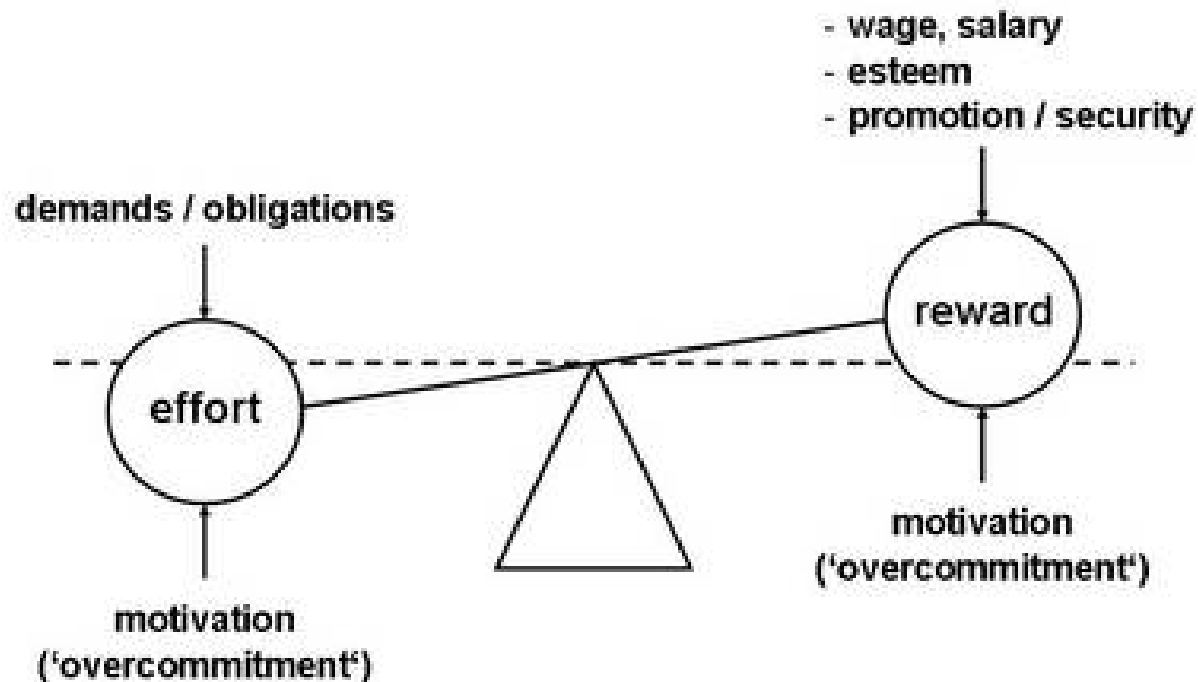
Effort-Reward Imbalance (ERI – Seigrist, 1996)

“An alternative theoretical model, which looks at the reward rather than the control structure of work”

- Effort is what the worker contributes
 - over-commitment is recognized as a risk factor
- Rewards are broken down into 3 categories:
 - money (e.g., adequate salary, pay raise),
 - esteem (e.g., respect and support), and
 - security/career opportunities (e.g., promotion prospects, job security and status).



Effort Reward Imbalance:



Imbalance maintained

- if no alternative choice available
- if accepted for strategic reasons
- if motivational pattern present (overcommitment)

http://www.uni-duesseldorf.de/MedicalSociology/Effort-reward_imbalance_at_wor.112.0.html#129

Organizational **Justice** Model (Elovainio, Kivimäki & Vahtera, 2001)



- Originally conceived as two dimensions of procedural and relational justice

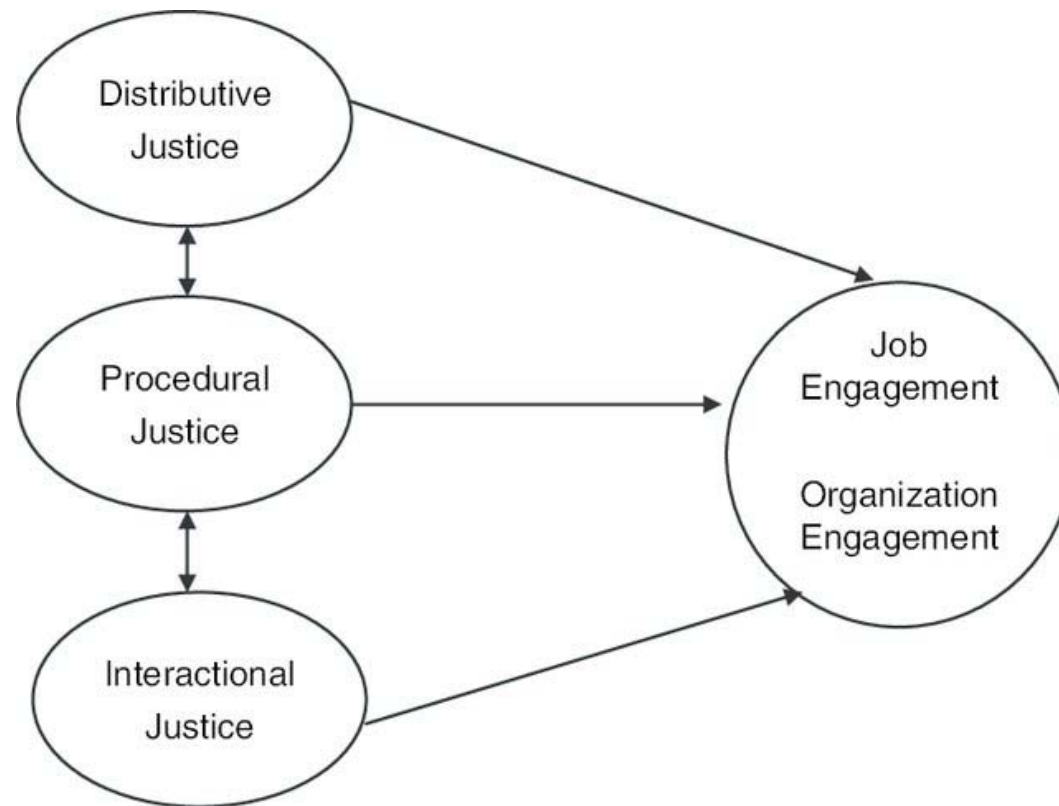
“In the work life context, it is a question not only of distributing resources and obligations, but also of the procedures and rules that guide the decision-making in the organization. Studies of these rules and procedures have provided the basis for a new line of research that evaluates leadership and social relationships in working communities; that is, **distributive, procedural, and relational** justice.”

“Justice at the Workplace: A Review” by Virtanen & Elovainio

Camb Q Healthc Ethics. 2018 Apr;27(2):306-315



Organizational Justice Model



So how were the 13 factors determined?

“The 13 Psychosocial Factors were determined **via a Grounded Theory approach**, which involved a thorough review of relevant literature and extensive consultation with Canadian employers, unions and employees. This included the following steps:

- Review of the **scientific literature** pertaining to workplace mental health.
- Review of relevant **Canadian regulatory and case law** pertaining to the workplace and psychological safety.
- Formation of an **advisory committee** which provided input on each step of the development of Guarding Minds at Work. The committee consisted of representatives from the mental health, scientific, union, occupational health and employer communities.
- **Consultation with experts** in workplace mental health from countries and jurisdictions with well-developed workplace psychosocial risk assessment resources.
- Implementation of focus groups across Canada with **key stakeholders** – legal professionals, union representatives, small and large employers, employees and researchers – to provide input into the description and relevance of the psychosocial factors.
- Implementation of a **national survey** amongst a diverse array of informants to gain input into the description and sample questions for each of the 13 Psychosocial Factors.

The 13 Psychosocial Factors are consistent with domains identified by a large body of research as areas of fundamental psychosocial risk; ...”



Guarding Minds @ Work

Français

Sign Up



A Workplace Guide to Psychological Health and Safety

About ▾

Resources

FAQs

Dashboard Login

Guarding Minds at Work

Assess, protect and promote
psychological health and safety

Created an account prior to 2018? [Head over here](#) to access your surveys until July 31, 2018.

Welcome to the all-new Guarding Minds at Work, a unique and free online resource to help employers - large or small, in the public or private sector - assess, protect and promote psychological health and safety in their workplaces.

At the heart of Guarding Minds at Work is a survey tool and summary reports that compare your results against a 2016 nationally representative sample of workers in industries and geographical regions across Canada. Suggested strategies, planning worksheets, and evaluation resources are all provided to help you take action to improve the psychological health and safety in your workplace.

Guarding Minds @ Work



“GM@W was commissioned by the Great-West Life Centre for Mental Health in the Workplace , funded by Great-West Life Assurance Company through The Key to Giving™ national corporate citizenship program of Great-West Life, London Life and Canada Life, and developed by researchers from the Centre for Applied Research in Mental Health and Addiction (CARMHA).”

“Guarding Minds at Work was developed by researchers from the Centre for Applied Research in Mental Health and Addiction (CARMHA) within the Faculty of Health Sciences at Simon Fraser University on the basis of extensive research, including data analysis of a national sample and reviews of national and international best practices, as well as existing and emerging Canadian case law and legislation.”

<https://www.guardingmindsatwork.ca/about/about>



Evolution of GM@W/CSA std

2008 at an ICOH-WOPS Conference at an after-hours focus group (free food) presented 12 Psychosocial Risk Factors (PRF) which included:

1. Manageable Workload;
12. Job Fit

2010 version: 12 Psychosocial Risk (PSR) Factors

5. **Psychological** Job Fit;
9. Workload **Management**

2012 version: **13** Psychosocial Risk Factors (PF)

5. Psychological **Competencies & Requirements**;
9. Workload Management

2013 CSA Z1003: 13 Psychosocial risk factors (workplace factors)

5. Psychological **Demands**;
9. Workload Management

2018 GM@W 13 Psychosocial Factors (PF)

5. Psychological **Competencies & Requirements**;
9. Workload Management



How did the COPSQQ survey come to Canada?





Mental Injury Tool (MIT) Group:

- OHCOW had been measuring workplace stress as a part of IAQ investigations **since 1991** and with Firefighters **since 1997**
- The Mental Injuries Tool group was established in **2009** out of a stakeholder sub-committee of worker representatives and the Occupational Health Clinics for Ontario Workers who were charged with “supporting worker representatives in taking action on prevention and workers’ compensation”.
- This sub-committee held a workshop in **2010** to select projects which could be developed jointly to address common concerns. The topic which received the most interest was **mental injuries** (workplace psychosocial risk factors; recognition & compensation for mental injuries).

10 yrs!



History:



- In **February 2011** members of the **Mental Injuries Tool (MIT)** working group attended a workshop which reviewed the **theories** behind common psychosocial measurement tools.
- Filled out surveys, reviewed theories/perspectives, discussed implications, opportunities for change – consulted with **Salvador Moncada** (Spain) - felt affinity for **ISTAS** – a Spanish labour-academic collaboration
- Based on these deliberations, the group decided to administer the **Copenhagen Psychosocial Questionnaire (COPSOQ)** and agreed to pilot test the survey at upcoming union conferences – asked **Tage Kristensen** for permission.
- **piloted** at 3 union conferences and union members of 21 social services agencies – plenty of suggestions of missed items which were added (tried wherever possible to use established questions)
- tools/website launched **October 2012**



MIT-COPSOQ Survey Content:

- began with the Short COPSOQ II – 28 questions of 14 psychosocial factors, 4 offensive behaviours, 2 work-life imbalance, job satisfaction and self-rated general health (added CORE COPSOQ III in 2017, 2 extra scales and a couple extra questions to existing scales)
- symptoms from long COPSOQ II – 20 questions of 5 symptoms (burnout, stress, sleep, somatic & cognitive)

MIT additions:

- demographics (age, sex, education, shift, hours)
- working conditions (perception of job security, sufficient resources, work through breaks, % paperwork, accommodations for outside responsibilities, accident investigation attitudes, tolerance of offensive behaviours)
- global rating of psychological H&S climate (supportive/healthy to toxic)
- 2 additional offensive behaviours – discrimination (defined by respondent) & vicarious offensive behaviours
- 10 questions about H&S/work environmental conditions (concerned, annoyed, interfere with work)





Copenhagen Psychosocial Questionnaire

(COPSOQ II Short version)

<http://nfa.dk/da/Vaerktoejer/Sporgeskemaer/Copenhagen-Psychosocial-Questionnaire-COPSOQ-II/Engelsk-udgave>

COPSOQ | International Network

(COPSOQ III CORE version)

<https://www.copsoq-network.org/assets/Uploads/Dimensions-and-items-in-the-COPSOQ-III-questionnaire-250718.pdf>



Workplace Psychosocial Factors

from the COPSOQ II Short & III CORE survey*

Work demands:

quantitative demands: not having enough time to get your work done
work pace: having to work at a high pace to get your work done
emotional demands: doing work that involves emotional issues

Work organization:

influence: having influence over the amount of work and how to do it
possibilities for development: able to learn new things, take initiative
meaning of work: feeling your work is important and meaningful
commitment: feeling your workplace makes a positive contribution

Work relationships:

predictability: being kept well informed, having enough information
recognition: being appreciated and treated fairly
role clarity: knowing what is expected and having clear objectives
leadership: supervisor has planning skills & values your job satisfaction
supervisor support: your supervisor listens and helps
colleague support*: your colleagues provide support & sense of community
role conflicts*: contradictory demands; having to do work inefficiently

COPSOQ
International Network

Work values (Social Capital):

vertical trust: information from mgmt is trustworthy; mgmt trusts worker
justice & respect: conflicts resolved fairly, work distributed fairly

Job/employment factors:

insecure job*: being worried about needing to find another job
unstable job*: being worried about changes in working loads/tasks
job satisfaction: all things considered, being satisfied with work
work/life conflict: time/energy away from work affected by job demands

Offensive behaviours:

sexual harassment; threats of violence; physical violence; bullying



Workplace Psychosocial Factors



items added by the Mental Injury Tool (MIT) group:

Work demands:

- unpaid hours/week
- work through breaks
- % time doing paperwork

Measures of employment precarity:

- full time/ not full time
- primary wage earner
- work for another employer
- job security

Job/employment factors:

- hours worked per week
- accommodation for outside responsibilities
- workplace has sufficient resources
- staffing levels are adequate

Personal/job demographics:

- seniority
- hours worked per week
- management status
- age category
- gender
- education
- job class/category
- shiftwork

Workplace culture/climate:

- accident investigation attitudes (look for cause, or to blame)
- violence & harassment policy effectiveness
- tolerance of behaviours harmful to mental health
- rating of psychological H&S

additional Offensive behaviours:

- discrimination
- vicarious offensive behaviours

Workplace environment and H&S concerns:

work station quality:

- thermal comfort
- air quality
- physical factors (noise & lighting)
- ergonomics

hazardous exposures/activities:

- dangerous chemicals
- biological
- radiation
- driving
- safety
- working alone

COPSOQ Health & Symptoms:

- self-rated health
- stress
- burnout
- sleeping troubles
- somatic symptoms
- cognitive symptoms



CSA 13 factors vs. COPSQQ 18-23 factors

- Psychological Support
 - Organizational Culture
 - Clear Leadership & Expectations
 - Civility & Respect
 - Psychological Demands
 - Growth & Development
 - Recognition & Reward
 - Involvement & Influence
 - Workload Management
 - Engagement
 - Balance
 - Psychological Protection
 - Protection of Physical Safety
- quantitative demands
 - work pace
 - emotional demands
 - Influence
 - role clarity
 - meaning of work
 - role conflicts
 - predictability
 - rewards (recognition)
 - quality of leadership
 - social support from supervisor
 - possibilities for development
 - commitment to the workplace
 - support from colleagues
 - job insecurity
 - work-life imbalance
 - vertical trust
 - justice & respect
 - general health
 - symptoms (4)
 - offensive behaviours (6)
 - H&S/work env. (10)
 - culture/climate (3)

CSA 13 factors vs. COPSQQ 18-22 factors



Comparison of work demand questions:

Workload Management

- 9. The amount of work I am expected to do is reasonable for my position.
- 61. I have control over prioritizing tasks and responsibilities when facing multiple demands at work.
- 22. I can talk to my supervisor about the amount of work I have to do.
- 48. My work is free from unnecessary interruptions and disruptions.
- 35. I have the equipment and resources needed to do my job well.

Likert scale measuring agreement

- 1. Do you get behind with your work?
- 2. How often do you not have time to complete all your work tasks?
- 3. Do you have to work very fast?
- 4. Do you work at a high pace throughout the day?
- 5. Does your work put you in emotionally disturbing situations?
- 6. Do you have to deal with other people's personal problems as part of your work?
- 6b. Is your work emotionally demanding?

Quantitative demands

Work pace

Emotional demands

Likert scale measuring frequency/agreement

COPSOQ
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How would you characterize the recommendations you made from the two reports?

- Recommendations from GM@W report: *focussed on relationships/social dimensions; personal level; psychological*
- Recommendations for COPSQ-MIT report: *focussed on legal H&S issues; focussed on environment, worker-management relations; organizational*



When all you have is a hammer, all your problems look like nails:

The tool you pick up will determine the interventions available



Differing Perspectives:

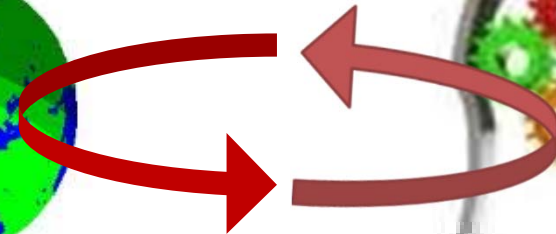
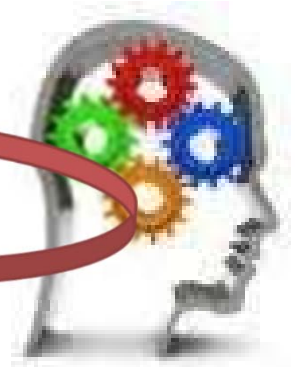


Psychology



focus on what's going on
between the ears

Psychosocial



focus on the interaction between the
social environment and the person



Ways to measure questionnaire validity

- **Face validity** – would a respondent feel you had covered the scope of the topic
- **Content validity** – do experts feel it covers the scope of the topic
- **Criterion validity** – can you compare the measurement to a gold standard (if there is one)
- **Convergent validity** – does the measure correlate with other measures it should correlate with
- **Discriminant validity** – can the scale does not correlate with measures that it shouldn't correlate with
- **Construct validity** – do the scales function the way the theory predicts (exploratory and/or confirmatory factor analysis)



Face validity:

- While generally not taken very seriously, face validity was very important to MIT group – wanted to ensure the scope of the topic had good coverage from the perspective of the user
- Pilot administrations brought numerous suggestions of items that were missed
- Anecdotally we heard that simply filling out the expanded survey was “educational” in itself
- The length of the survey is always an issue, tried to strike a balance between being too long and incomplete – maximum tolerable seems to be at about 20-25 minutes for the majority (significant minority feel this is too long: typically 10-25% abandonment which includes those who just want to see the content but not participate) – want to ensure that we cover the full breadth of the topic



Content validity



National Research Centre
for the Working Environment

- MIT group appreciated the work and intentions in the selection of items for the COPSOQ II – attempting to span the major theories of workplace stress
- Academic MIT partners also endorsed COPSOQ II and had some experience using COPSOQ scales in investigations (**Bernadette Stringer & Ted Haines** et al (2008) “Final Report on Evaluating Mental Health Works: a feasibility study”)
- The COPSOQ website with the psychometrics and the history of the development of the scales was quite valuable and appreciated
- Published scientific literature seems to appreciate the breadth of COPSOQ (over 400 publications where COPSOQ has been used)





Theoretical Framework:

- The intent was to create an instrument that measured psychosocial risk factors by covering the important dimensions of the seven theories of workplace stress:
 1. The job characteristics model (JCM)
 2. The Michigan organization stress (MOS) model
 3. The job demands–control model (DC)
 4. The sociotechnical (ST) approach
 5. The action-theoretical (AT) approach
 6. The effort–reward imbalance (ERI) model
 7. The vitamin model (VM)
 8. also absorbed other models such as Organizational Justice, over the yrs
 9. recently demonstrated that elements are also consistent with the Job Demands – Resources (JD-R) model



2016 Survey:



- In conjunction with a recognized Canadian polling organization, an online survey was completed between **February and March 2016**.
- Selection criteria were any **employed Canadians** working in a workplace with **5 or more employees**.
- Survey was made available in **English & French**
- All cases completed were **pre-recruited panel members** among those willing to complete interviews online - a total of **4,113 participants completed the survey online**
- The data set is **weighted** according to the most recent Labour Force Survey data (February 2016) from Statistics Canada on age, gender and region.



Dissecting the effect of workplace exposures on workers' rating of psychological health and safety

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Correspondence

Abstract

Objectives: To validate the factor structure of the Copenhagen Psychosocial Questionnaire (COPSOQ) in a North American population and dissect the associations between psychosocial factors and workplace psychological health and safety.

Methods: Confirmatory factor analysis and multivariate linear regression were used to determine the associations between COPSOQ dimensions and a global rating of workplace psychological health and safety. Models were stratified by sex, gender



Contents lists available at ScienceDirect

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journal homepage: www.e-shaw.net

Original Article <https://www.sciencedirect.com/science/article/pii/S2093791118302725>

The Third Version of the Copenhagen Psychosocial Questionnaire

Hermann Burr^{1,*}, Hanne Berthelsen², Salvador Moncada³, Matthias Nübling⁴,
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Albert Navarro^{9,10}, Hans-Joachim Lincke⁴, Christine Bocéréan^{5,11}, Ceyda Sahan⁶,
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2019 EKOS Survey:



- In conjunction with a recognized Canadian polling organization, an **online** survey was completed in **March 2019**.
- Selection criteria were any **employed Canadian** working in a workplace with **5 or more employees**.
- Survey was made available in **English & French**
- **4008 respondents** completed the survey (**636** of whom completed both the 2016 and the 2019 surveys – surveys could be **linked**)
- EKOS provided **weighting factors** (based on age, sex and region) to adjust the results to the monthly StatsCan Labour Force Survey so that they can be considered **representative** of the Canadian working population



Item & Scale analysis

Floor and ceiling effect – a scale should not have more than 15% endorsement of the bottom and top ends of the scales

% missing – a scale should have no more than 2.5% of the respondents skipping the question

Cronbach's alpha (α) is a measure of internal consistency (how well the items in a scale “hang together” – a weak indicator (should be more than 0.7 but not too high)) – use the **Spearman-Brown Coefficient** for 2 items scales

Item response frequencies – for each question the percentage of respondents endorse a single scale value should be no more than 40%



		English (n=3237)					French (n=771)				
	number of items	mean score	Cronbach's α	% missing	% floor	% ceiling	mean score	Cronbach's α	% missing	% floor	% ceiling
quantitative demands	2	46	0.611	0.5%	6.4%	3.3%	41	0.851	0.4%	9.1%	1.6%
work pace	2	60	0.706	1.4%	1.2%	8.3%	62	0.740	1.9%	1.5%	10.1%
emotional demands	3	46	0.782	0.2%	4.6%	2.2%	47	0.779	0.4%	3.1%	1.7%
influence	2	49	0.720	0.1%	6.6%	5.5%	48	0.736	0.1%	6.6%	3.2%
possibilities for development	3	70	0.753	1.3%	0.7%	11.4%	69	0.747	1.8%	0.7%	8.7%
meaning of work	2	70	0.886	4.6%	3.2%	25.9%	74	0.810	2.6%	1.7%	23.2%
commitment to the workplace	2	61	0.722	0.6%	4.1%	12.0%	64	0.645	0.4%	2.2%	10.5%
predictability	2	53	0.782	0.6%	4.9%	6.0%	56	0.794	0.6%	3.7%	6.9%
rewards (recognition)	2	62	0.837	2.6%	4.0%	13.9%	65	0.724	2.5%	1.6%	14.2%
role clarity	2	71	0.827	0.9%	1.6%	19.9%	72	0.852	0.8%	1.2%	20.8%
role conflicts	3	48	0.826	0.9%	6.1%	3.8%	48	0.827	1.2%	2.1%	3.9%
quality of leadership	2	55	0.857	2.4%	6.0%	5.2%	59	0.845	1.2%	2.8%	6.6%
social support from supervisor	3	67	0.855	2.2%	4.4%	23.8%	67	0.856	1.0%	3.0%	20.1%
social support from colleagues	2	74	0.728	0.9%	0.9%	20.6%	74	0.690	0.5%	0.4%	15.8%
job insecurity	3	33	0.692	0.7%	16.4%	1.5%	27	0.721	0.6%	20.4%	1.4%
job satisfaction	1	70		0.7%	4.1%	24.4%	71		0.6%	2.6%	23.9%
work-life imbalance	3	46	0.797	0.2%	7.8%	7.0%	40	0.843	0.6%	13.6%	6.3%
trust of mgmt	2	65	0.794	0.3%	2.6%	12.6%	69	0.767	0.6%	1.2%	14.0%
justice & respect	2	58	0.780	0.3%	3.7%	8.3%	61	0.737	0.8%	1.7%	7.2%

	number of items	Cronbach's α (EN + FR)	Lower 95% CI	Upper 95% CI	% missing	% floor	% ceiling
quantitative demands	2	0.663	0.641	0.683	0.5%	6.9%	3.0%
work pace	2	0.712	0.693	0.729	1.5%	1.2%	8.6%
emotional demands	3	0.780	0.768	0.792	0.2%	4.3%	2.1%
influence	2	0.712	0.693	0.729	0.1%	6.6%	5.0%
possibilities for development	3	0.752	0.738	0.765	1.4%	0.7%	10.9%
meaning of work	2	0.874	0.866	0.882	4.2%	2.9%	25.4%
commitment to the workplace	2	0.710	0.692	0.728	0.6%	3.8%	11.7%
predictability	2	0.785	0.771	0.798	0.6%	4.7%	6.1%
rewards (recognition)	2	0.819	0.807	0.830	2.5%	3.6%	14.0%
role clarity	2	0.831	0.820	0.841	0.9%	1.5%	20.1%
role conflicts	3	0.826	0.816	0.835	1.0%	5.3%	3.9%
quality of leadership	2	0.855	0.847	0.862	2.2%	5.3%	5.5%
social support from supervisor	3	0.855	0.845	0.864	1.9%	4.1%	23.1%
social support from colleagues	2	0.721	0.703	0.738	0.8%	0.8%	19.6%
job insecurity	3	0.697	0.681	0.713	0.7%	17.2%	1.5%
job satisfaction	1				0.7%	3.8%	24.3%
work-life imbalance	3	0.807	0.797	0.817	0.2%	8.9%	6.8%
trust of mgmt	2	0.791	0.778	0.804	0.4%	2.4%	12.9%
justice & respect	2	0.773	0.759	0.787	0.4%	3.3%	8.1%



item	score				
	0	25	50	75	100
q1 get behind with your work	14.3%	27.0%	36.9%	15.6%	6.1%
Q21B2 not have time to complete all your work tasks	11.9%	25.9%	29.8%	23.8%	8.5%
q3 work very fast	4.3%	12.7%	41.3%	27.1%	14.5%
q4 high pace throughout the day	3.8%	11.4%	32.5%	35.2%	17.1%
Q21E discuss workload with supervisor	9.5%	13.9%	22.6%	25.1%	28.8%
q5 emotionally disturbing situations	19.9%	24.7%	33.4%	16.9%	5.1%
q6 deal to other people's personal problems	15.0%	19.7%	29.8%	23.1%	12.3%
q7 large degree of influence	12.7%	18.4%	30.0%	27.7%	11.2%
q8 influence the amount of work	15.6%	20.9%	32.7%	22.1%	8.7%
Q22A emotionally demanding	13.9%	21.6%	31.3%	20.6%	12.6%
q9 learning new things	5.6%	11.0%	28.4%	33.7%	21.2%
Q22C skills or expertise	3.0%	6.6%	18.7%	37.8%	33.9%
q10 take the initiative	2.5%	6.6%	22.9%	36.8%	31.2%
q11 work meaningful	5.2%	8.2%	22.1%	33.1%	31.5%
q12 work you do is important	3.8%	6.5%	20.4%	34.3%	35.0%



item	score				
	0	25	50	75	100
q13 work is of great importance to you	7.1%	10.3%	24.9%	35.3%	22.3%
q14 recommend to apply for a position	11.3%	11.5%	25.9%	31.2%	20.0%
q15 you informed well in advance	17.5%	18.0%	29.7%	25.6%	9.2%
q16 receive all the info you need	5.7%	14.0%	29.7%	37.3%	13.3%
q17 work recognised appreciated by mgmt	11.3%	13.1%	27.1%	30.1%	18.4%
q18 treated fairly	5.5%	8.6%	23.3%	37.8%	24.8%
q19 work have clear objectives	3.2%	7.3%	24.2%	40.3%	24.9%
q20 know exactly what is expected	2.5%	5.4%	19.4%	43.8%	28.9%
Q22N2 contradictory demands	17.9%	23.5%	30.6%	17.6%	10.3%
Q22N3 should do work a different way	11.0%	19.9%	37.1%	21.1%	10.8%
Q22N4 doing unnecessary work	13.8%	22.0%	33.7%	19.2%	11.3%
q21 immediate superior gives high priority to job satisfaction	13.0%	11.1%	29.1%	32.8%	14.1%
q22 immediate superior is good at work planning	12.3%	11.3%	31.4%	32.3%	12.8%
Q22Q superior is good at solving conflicts	13.8%	12.6%	28.6%	30.5%	14.5%
q23 nearest superior willing to listen	6.1%	9.0%	21.9%	28.2%	34.7%



item	score				
	0	25	50	75	100
q24 help support from your nearest superior	7.8%	11.3%	25.2%	28.6%	27.1%
Q23B2 support from your colleagues	3.0%	6.9%	24.2%	38.4%	27.5%
Q23B3 atmosphere good between colleagues	1.3%	2.7%	14.9%	45.9%	35.1%
Q24C afraid of becoming unemployed	38.7%	24.9%	19.9%	8.8%	7.7%
Q24D difficulty finding another job	24.5%	17.8%	23.2%	16.5%	17.9%
Q24E transferred to another job	61.2%	17.5%	11.9%	5.9%	3.5%
q25 pleased with your job	3.8%	8.2%	16.2%	47.4%	24.3%
q28 Can you trust mgmt information	6.0%	8.6%	27.5%	38.6%	19.2%
q29 Does the mgmt trust employees	4.3%	7.9%	24.3%	42.4%	21.1%
q30 conflicts resolved in a fair way	7.3%	10.5%	31.5%	36.4%	14.4%
q31 work distributed fairly	7.2%	13.1%	33.3%	34.5%	11.8%
	0	33	67	100	
q26 work drains energy affects private life	18.7%	32.4%	30.9%	18.1%	
q27 work takes time affects private life	29.3%	29.9%	26.5%	14.3%	
Q25B2 double presence	27.5%	34.6%	20.7%	17.2%	



Summary:

of the 18 scales tested:

- 2 scales had a internal consistency Cronbach's $\alpha < 0.7$ [[quantitative demands](#) (EN only), and [job insecurity](#) (combination of 2 scales; $\alpha=0.697$)]
- 2 scales had more than 2.5% missing values [[meaning of work](#) and [recognition](#)]
- there were no floor effects
- 4 scales had ceiling effects [[meaning of work](#), [role clarity](#), [social support from supervisor](#), and [job satisfaction](#)]
- of the 44 questions with 217 possible values, only 7 had endorsements above 40%



Guarding Minds at Work questionnaire

- The GM@W questionnaire was the basis of the 13 Factors in the CSA Z1003 standard
- Given the profile of the 13 Factors and the fact that GM@W is the only freely available instrument that is connected directly with them, we searched online for psychometric properties but could not find them
- Given some work we had done with the survey we suspected that it might be difficult to confirm that the survey's scales uniquely measured the 13 Factors
- An abstract found online further confirmed our suspicions



attempt to validate 13 factors:

Validation of the Guarding Minds @ Work Survey: A Tool for Assessing Psychosocial Factors in the Workplace

Aleka MacLellan¹, Dan Bilsker², Merv Gilbert², E. Kevin Kelloway¹

¹*Saint Mary's University, Halifax, Nova Scotia, Canada,*

²*Simon Fraser University, Burnaby, British Columbia, Canada*

... found that a **four**-factor structure provided a good fit for the data:

- work environment,
- supervisor support,
- workload management, and
- psychological health factors



11-13 April 2016, Royal Olympic Hotel, Athens, Greece

<http://spact.pt/research/proceedings/%5B2016%5D%2012th%20EAOHP%20Athens.pdf>





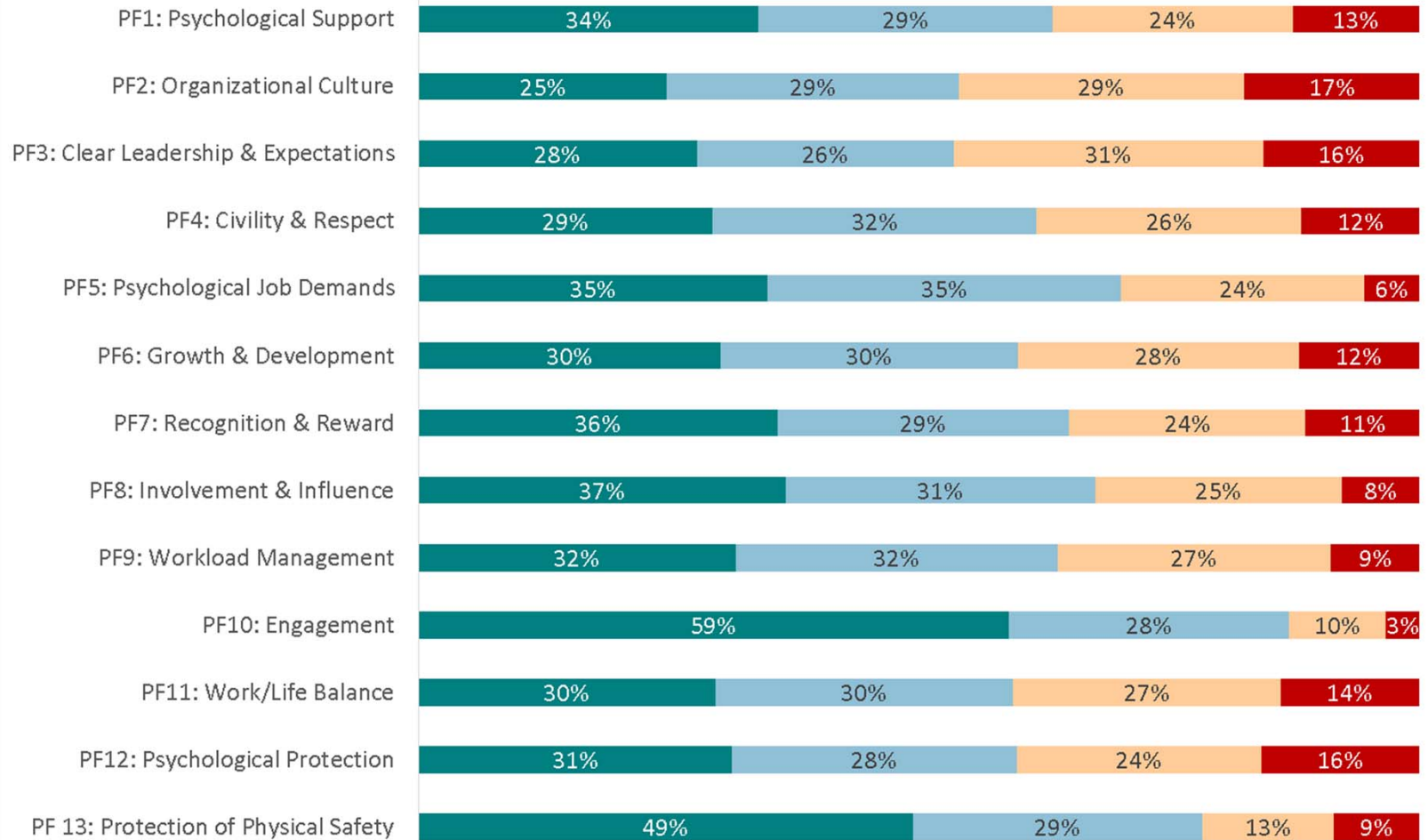
2020 EKOS Survey:

- In conjunction with a recognized Canadian polling organization, an **online** survey was completed between **February 10** and **March 5 2019**.
- Selection criteria were any **employed worker** working in an **Ontario** workplace with **5 or more employees**.
- Survey was made available only in **English**
- **1006 respondents** completed the survey (11.8% response rate)
- EKOS provided **weighting factors** (based on age, sex and region) to adjust the results to the monthly StatsCan Labour Force Survey so that they can be considered **representative** of the Ontario working population

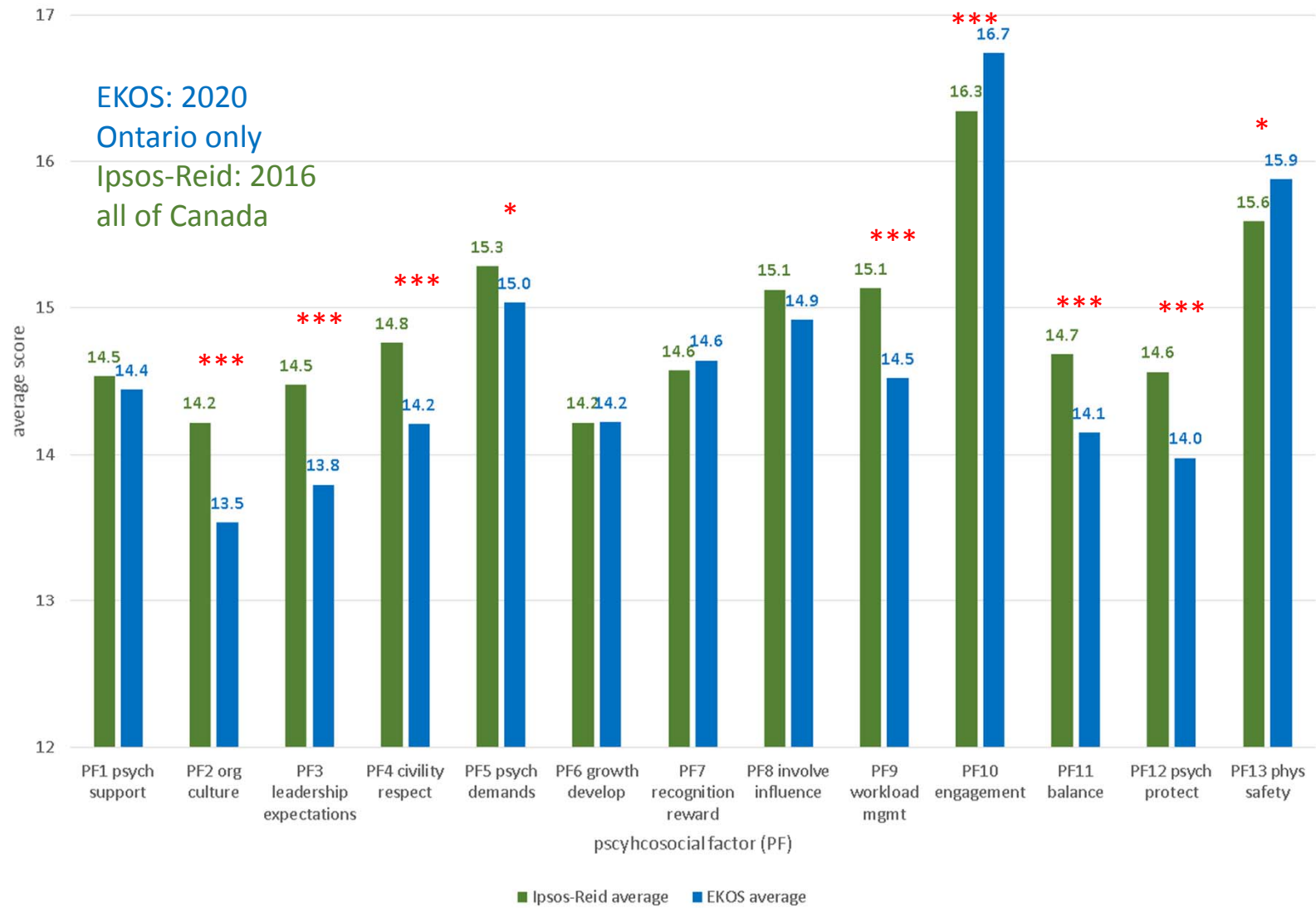


Overall Psychosocial Factor Scores

■ 17-20 strengths ■ 14-16 minimal ■ 10-13 significant ■ 5-9 serious



Comparison of Ipsos-Reid and EKOS Average Scores



pscyhosocial factor (PF)	average	std dev	n=	missing	floor	ceiling	Cronbach's α
PF1 psych support	14.4	3.8	988	1.8%	2.1%	8.3%	0.852
PF2 org culture	13.5	3.9	995	1.1%	2.2%	5.3%	0.870
PF3 leadership expectations	13.8	3.8	992	1.4%	0.6%	6.9%	0.860
PF4 civility respect	14.2	3.7	994	1.2%	2.4%	6.6%	0.869
PF5 psych demands	15.0	3.2	990	1.6%	0.1%	8.4%	0.776
PF6 growth develop	14.2	3.7	990	1.6%	1.6%	7.1%	0.837
PF7 recognition reward	14.6	3.8	992	1.4%	1.3%	9.9%	0.841
PF8 involve influence	14.9	3.6	994	1.2%	0.9%	10.6%	0.841
PF9 workload mgmt	14.5	3.4	988	1.8%	0.6%	6.5%	0.797
PF10 engagement	16.7	3.1	984	2.2%	0.4%	22.5%	0.834
PF11 balance	14.1	3.8	988	1.8%	1.5%	8.5%	0.841
PF12 psych protect	14.0	4.0	992	1.4%	3.2%	6.7%	0.885
PF13 phys safety	15.9	3.8	990	1.6%	1.6%	21.0%	0.900



Cronbach's α – experiment (1st five questions)

GM@W factors	actual questions
PF1	1. My employer offers services or benefits that adequately address my psychological and mental health.
PF2	2. All people in our workplace are held accountable for their actions.
PF3	3. In my job, I know what I am expected to do.
PF4	4. People treat each other with respect and consideration in our workplace.
PF5	5. Hiring/promotion decisions consider the “people skills” necessary for specific positions.

Reliability Analysis

Scale Reliability Statistics

	mean	sd	Cronbach's α
scale	2.90	0.649	0.761

item	score			
	1	2	3	4
q1psychser	16.4%	15.7%	41.8%	26.2%
q2accounta	17.0%	25.9%	37.5%	19.5%
q3knowexpe	1.7%	7.3%	35.6%	55.3%
q4respectc	6.4%	13.7%	47.9%	32.0%
q5hirepeop	15.1%	24.5%	40.9%	19.7%
q6feedback	14.0%	28.5%	35.5%	22.0%
q7supervis	8.1%	11.4%	35.8%	44.7%
q8talksupr	6.2%	11.2%	34.4%	48.3%
q9reasonab	10.3%	17.7%	36.0%	36.0%
q10enjoywo	5.6%	10.6%	40.4%	43.4%
q11encoura	15.2%	18.9%	29.5%	36.3%
q12minimiz	21.5%	30.4%	36.3%	11.8%
q13protect	6.2%	11.6%	37.3%	44.9%
q14suprsay	10.4%	20.8%	37.5%	31.2%
q15sincere	6.6%	20.1%	45.2%	28.3%
q16effecti	19.6%	26.2%	36.6%	17.5%
q17peoplep	21.3%	29.6%	37.7%	11.3%
q18hirefit	10.2%	22.0%	48.1%	19.6%
q19suprope	10.2%	16.6%	40.1%	33.0%
q20paidfai	11.1%	14.8%	36.1%	38.0%
q21control	4.9%	10.0%	37.0%	48.0%
q22talksup	8.9%	13.1%	37.3%	40.6%

item	score			
	1	2	3	4
q23extraef	1.9%	3.2%	31.7%	63.1%
q24worklif	5.3%	17.4%	43.2%	34.2%
q25suprcar	11.2%	15.7%	39.8%	33.3%
q26safetyt	9.2%	13.7%	37.6%	39.5%
q27support	8.1%	17.9%	36.7%	37.4%
q28effecti	16.3%	28.8%	37.7%	17.2%
q29informe	17.7%	25.6%	36.4%	20.2%
q30backgro	7.2%	9.5%	35.9%	47.4%
q31emoskil	1.5%	4.9%	32.0%	61.6%
q32opportu	19.6%	23.6%	34.9%	21.8%
q33appreci	18.0%	23.8%	34.5%	23.7%
q34opinion	7.9%	16.1%	46.8%	29.2%
q35suffres	5.6%	17.1%	44.9%	32.5%
q36workimp	7.2%	14.3%	36.3%	42.3%
q37promote	13.9%	25.0%	37.9%	23.3%
q38prevent	8.3%	12.3%	38.6%	41.0%
q39acciden	6.7%	10.5%	37.7%	45.0%
q40returnw	9.4%	18.4%	41.3%	31.1%
q41partcom	9.0%	15.9%	41.7%	33.4%
q42suprhel	14.0%	23.2%	36.5%	26.2%
q43unneces	11.7%	19.7%	41.8%	26.9%
q44suprval	8.8%	17.4%	41.8%	32.0%

item	score			
	1	2	3	4
q45growthd	10.0%	20.7%	42.8%	26.6%
q46celebra	10.3%	19.3%	40.1%	30.2%
q47informe	12.3%	25.6%	38.5%	23.7%
q48freeunn	22.4%	36.2%	28.4%	13.2%
q49committ	3.4%	8.1%	37.3%	51.2%
q50talksup	11.8%	19.6%	36.3%	32.5%
q51psychhe	19.9%	23.1%	36.5%	20.6%
q52toolsto	5.4%	10.3%	36.2%	48.0%
q53underst	12.0%	21.8%	40.6%	25.7%
q54vertica	23.3%	25.0%	34.9%	16.8%
q55effecti	19.3%	28.3%	35.3%	17.2%
q56address	14.3%	23.4%	40.4%	22.0%
q57persona	7.3%	13.1%	40.4%	39.1%
q58develop	6.0%	13.6%	38.8%	41.6%
q59valueco	10.7%	19.4%	36.7%	33.2%
q60encoura	15.2%	24.1%	35.6%	25.1%
q61control	7.1%	15.3%	38.5%	39.1%
q62proudwo	3.1%	5.5%	31.7%	59.8%
q63energyl	15.6%	27.2%	36.6%	20.7%
q64dealeff	11.0%	18.0%	35.5%	35.6%
q65respond	8.5%	12.7%	36.8%	42.1%

Summary:

of the 13 scales tested:

- all scales had a internal consistency Cronbach's $\alpha > 0.7$
- none of the scales had more than 2.5% missing values
- there were no floor effects
- 2 scales had ceiling effects [[PF10: engagement](#) and [PF13: physical safety](#)]
- of the 65 questions with 260 possible values, 37 had endorsements above 40% (one item had 2 scale values endorsed >40%)



now over to Peter for the “rest of the story” ...

