

Auditing the internal responsibility system in the Ontario mining industry

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IWH Internal Plenary
February 14, 2017

Outline

This session will update a March 2015 internal plenary that described the development of a 'best practices' guideline for the underground mining industry in Ontario.

Over the past two years, IWH has collaborated with Workplace Safety North to pilot workplace questionnaire to measure perceptions of practices related to the internal responsibility system.

The presentation will overview instrument development and summarize psychometric analysis in four completed mining operation pilots.

The context:

Mining, Safety and Prevention Review, Ontario Ministry of Labour

Two deaths at a Vale Mine, Sudbury, following a very long strike

The Minister of Labour appoints an Advisory Group to the Mining Health, Safety and Prevention Review

Membership include:

labour and employer co-chairs

(J Perquin, Steelworkers, Pittsburgh: F Kerr, ex-Inco,
the labour and employer co-chairs of the MLRC

(long-standing Section 21 committee),

C Belanger-Michaud, WSN

C Mustard, IWH

Five working groups, bipartite composition

Supported by a Ministry secretariat, directed by W De L'Orme

January 2014 to February 2015

Background

Origins of the 'internal responsibility system'

Robens Report (UK, 1972) criticizes prescriptive approach to OHS regulation.

Proposes that workers and employers have a 'natural identity of interest' to improve OHS working conditions

Recommends encouragement of workplace self-regulation, with an emphasis on mechanisms to provide worker representation and participation

Very influential in the UK, in Canada and in Australia

Background

Origins of the 'internal responsibility system'

Ham Commission (Ontario, 1976)

Existing regulatory system of exclusive management control and responsibility was 'unjust and ineffective'

'workers have been denied effective participation in tackling OHS problems'

Recommended legislation that would provide participative rights and responsibilities for workers

Background

Origins of the 'internal responsibility system'

Occupational Health and Safety Act, 1978 establishes rights and duties that form the basis of the internal responsibility system in Ontario

Worker rights: the right to know
 the right to participate
 the right to refuse

Joint Health and Safety Committees:
representation and participation

Protection from reprisal

Some history:

Measuring the integrity of the IRS in Ontario Workplaces

Touhy C, Simard M. The impact of Joint Health and Safety Committees in Ontario and Quebec. A study prepared for the Canadian Association of Administrators of Labour Law. 1993. Toronto, Canada.

SPR Associates. Highlights of the 1994 Ontario Survey of Occupational Health and Safety and Joint Health and Safety Committees. A Benchmark study of the internal responsibility system. November 1994.

Shannon HS, Walters V, Lewchuck W, Richardson J, Moran LA, Haines T, Verma D. Workplace organizational correlates of lost-time accident rates in manufacturing. American Journal of Industrial Medicine 29:258-268;1996

O'Grady J. Joint Health and Safety Committees: Finding a Balance. In: Sullivan T. Injury and the new world of work. P162-197. Vancouver, BC: UBC Press. 2000.

Geldart S, Smith CA, **Shannon HS**, Lohfeld L, Organizational practices and workplace health and safety: a cross-sectional study in manufacturing companies. Safety Science 48: 562-569; 2010.

Which brings us to the
Mining Health, Safety and Prevention Review
2014-2015

Internal Responsibility System Working Group

N Hutchison, Ontario Federation of Labour

S Campbell, Mine Manager, Kidd Operations, Glencore

Consultations in spring/summer 2014 document concerns about the performance of the IRS in underground mines.

Ontario Mining Association calls for an effort to define roles and responsibilities in the IRS. Organized labour rejects.

C Mustard proposes the drafting of a statement of best practices for an effective internal responsibility system.

The Working Group report describes best practices for an effective internal responsibility system under four main headings:

- 1) management practice,
- 2) worker representation and participation,
- 3) clear standards and
- 4) effective enforcement.

The sources of the best practices documented in the Working Group report include submissions to the spring 2014 consultation of the MHSPR, academic publications, more than 25 interviews with subject matter experts and documents prepared by standards or regulatory authorities.

All 56 best practice statements received consensus support

Advisory Group Recommendation:

The mining industry to establish the Internal Responsibility System best practice guideline sections that apply to the workplace parties as an industry benchmark with:

- the Ontario Mining Association endorsing the best practice guidelines relating to the roles of workplace parties for implementation by its members
- the system partners using the best practices as a benchmark to conduct periodic audits of the IRS.

Management Practice

Senior management clearly understand their roles and responsibilities, ensure all layers of management exercise their responsibility to reduce OHS hazards and are accountable for the performance of all levels of the mining operation including the integrity of the internal responsibility system. The mining operation's senior leadership are champions for health and safety and consistently support processes that engage worker participation in the identification and control of OHS hazards, including the work of the JHSC.

17 best practice statements

Worker Representation and Participation

Workers are to be trained in their role in the internal responsibility system and are to raise OHS concerns to their supervisor, as per the requirements of the OHSA. Workers may also report OHS concerns to their JHSC representatives, worker representatives or Ministry of Labour inspectors. Workers are to be enabled to participate in joint decision-making concerning the identification and control of OHS hazards and actively report unsafe working conditions and hazards without fear of reprisal.

14 best practice statements

Clear Standards

Management provides workers and frontline supervisors with work and working conditions that are safe and healthy and provide the training, resources and information needed by workers and supervisors to do their jobs without adverse risk to their health.

10 best practice statements

Effective Enforcement

Ministry of Labour inspectors are to understand their role to the mining operation's internal responsibility system. They inspect and enforce the mining operation's compliance with OHS legislation, regulations and standards. Ministry of Labour inspectors will provide assistance and guidance to the workplace parties. The involvement of Ministry of Labour inspectors is encouraged by all workplace parties.

15 best practice statements

Next Steps (March 2015)

Develop and pilot a method for third-party auditing of the effectiveness of the IRS in an underground mining operation

Dimensions would include:

Interview with or questionnaire completed by

- senior management
- sample of supervisors
- sample of workers
- co-chair, members, of Joint Health & Safety Committees

Document review

Pilot in collaboration with WSN

Questionnaire Development

IWH and WSN project teams worked together to select best practice statements that were appropriate for respondent self-report.

WSN structured item language to reflect the respondent's role: senior management, supervisor, worker.

WSN proposes mining operations recruit all employees to complete 46 item questionnaire.

Pilot audits have been completed in five Ontario underground mining operations.

Questionnaire Development

Best Practice Statement

Providing for active participation by workers and worker representatives in the implementation and improvement of the mining operation's OHS programs and practices (MP.d)

Worker survey item

I am encouraged to participate in improving the mining operation's health and safety programs and procedures

Supervisor survey item

I encourage my reports to participate in improving the mining operation's health and safety programs and procedures

Senior Management survey item

I seek input from JHSC/supervisors/workers in improving our health and safety program, procedures and worker training programs

Questionnaire Development

Best Practice Statement

Consistent daily practice by supervisors to brief workers at the beginning of a work shift on the status of OHS hazards in their work area (MP.f)

Worker survey item

I am briefed on the status of health and safety hazards in my work area at the beginning of every shift

Supervisor survey item

I brief all workers on the status of health and safety hazards in their work area at the beginning of every shift

Senior Management survey item

Supervisors are expected to brief all workers on the status of health and safety hazards in their work area at the beginning of every shift

Internal Responsibility System (IRS), Underground mining, Ontario

Workplace Safety North, 4 pilot audits

46 items grouped in 10 dimensions

Leadership visibility and commitment (D1: 3 items)

Whenever I raise a safety concern, it is addressed in a timely manner

Involvement and empowerment (D2: 6 items)

I am encouraged to participate in improving the mining operation's health and safety program

Communication and management of change (D3: 6 items)

I am kept up to date when there is a change in working procedures

Risk appreciation (D4: 4 items)

When I see something unhealthy or unsafe, I always report it

Responsiveness and Resources (D5: 3 items)

The resources, equipment and tools I need to do my job safely are available to me

Internal Responsibility System (IRS), Underground mining, Ontario

Workplace Safety North, 4 pilot audits

46 items grouped in 10 dimensions

Mutual trust (D6: 4 items)

I am confident I can exercise my right to refuse unsafe work at this operation

JHSC support (D7: 4 items)

I am provided the opportunity to communicate with the JHSC on OHS matters

Training and competency (D8: 6 items)

I am aware that I have the right to raise concerns to my supervisor or the JHSC

Safety as a value (D9: 6 items)

Safety is the first priority in my mind when completing a job

Rules and Systems (D10: 4 items)

Consequences for not following the rules are consistently applied to all

Internal Responsibility System (IRS), Underground mining, Ontario

Workplace Safety North, 4 pilot audits

Internal consistency and correlation of dimensions scores

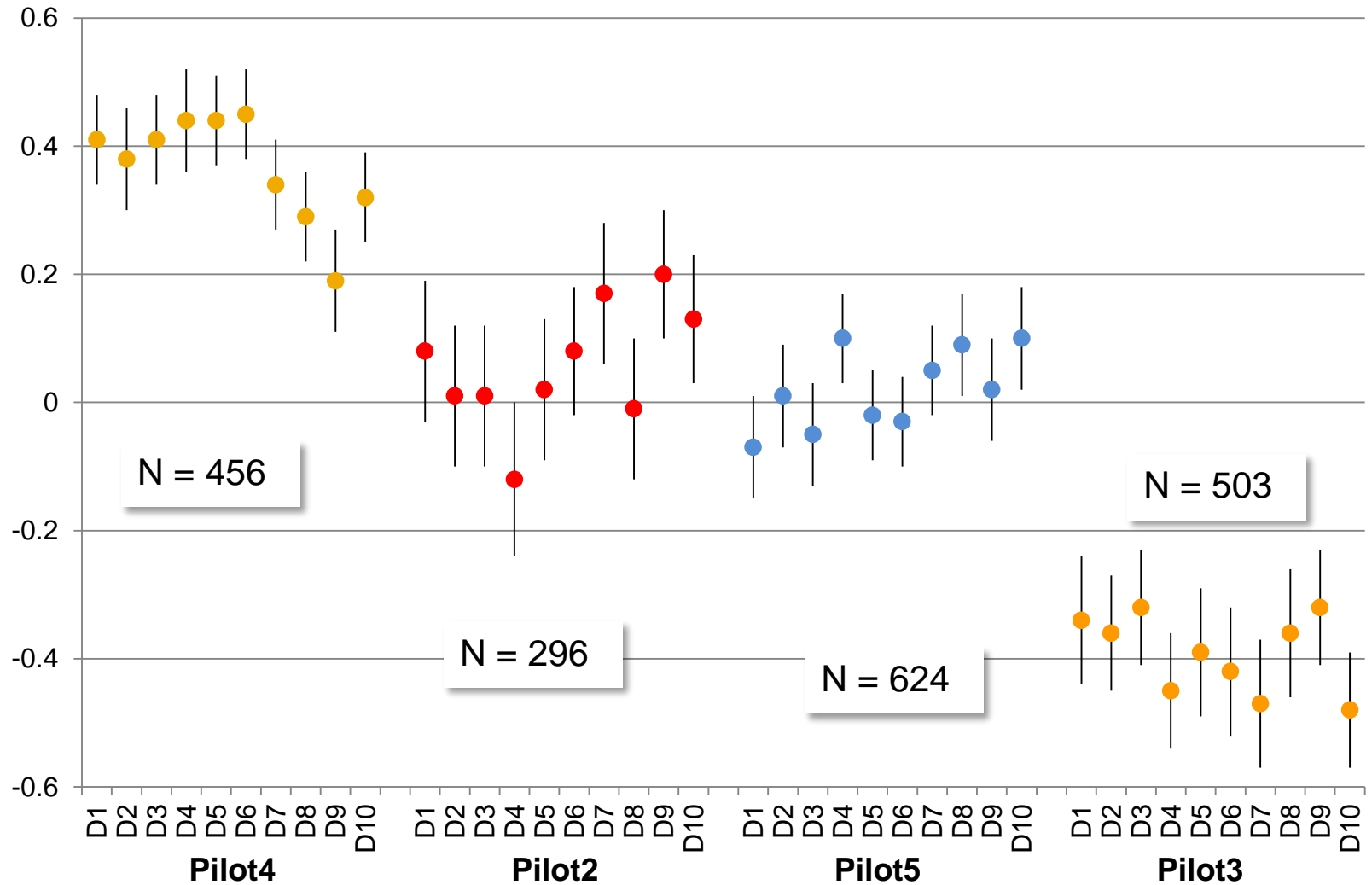
10 dimensions: 46 items, all respondents, N=1879

	Internal Consistency	Correlation of dimension scores (all respondents)									
		D2	D3	D4	D5	D6	D7	D8	D9	D10	
Leadership (3 items)	0.81	0.77	0.74	0.51	0.67	0.67	0.51	0.56	0.52	0.58	
Involvement (6 items)	0.86		0.78	0.55	0.68	0.64	0.60	0.58	0.58	0.62	
Communication (6 items)	0.89			0.59	0.70	0.67	0.56	0.60	0.55	0.63	
Risk appreciation (4 items)	0.56				0.58	0.54	0.45	0.52	0.51	0.56	
Responsiveness (3 items)	0.76					0.68	0.56	0.57	0.53	0.63	
Mutual trust (4 items)	0.72						0.55	0.60	0.54	0.61	
JHSC (4 items)	0.80							0.67	0.65	0.56	
Training/competency (6 items)	0.85								0.76	0.61	
Safety as a value (6 items)	0.75									0.66	
Rules and systems (4 items)	0.74										

Internal Responsibility System (IRS), Underground mining, Ontario

Workplace Safety North, 4 pilot audits

Mean perception scores (standardized), 10 dimensions: 46 items, all respondents

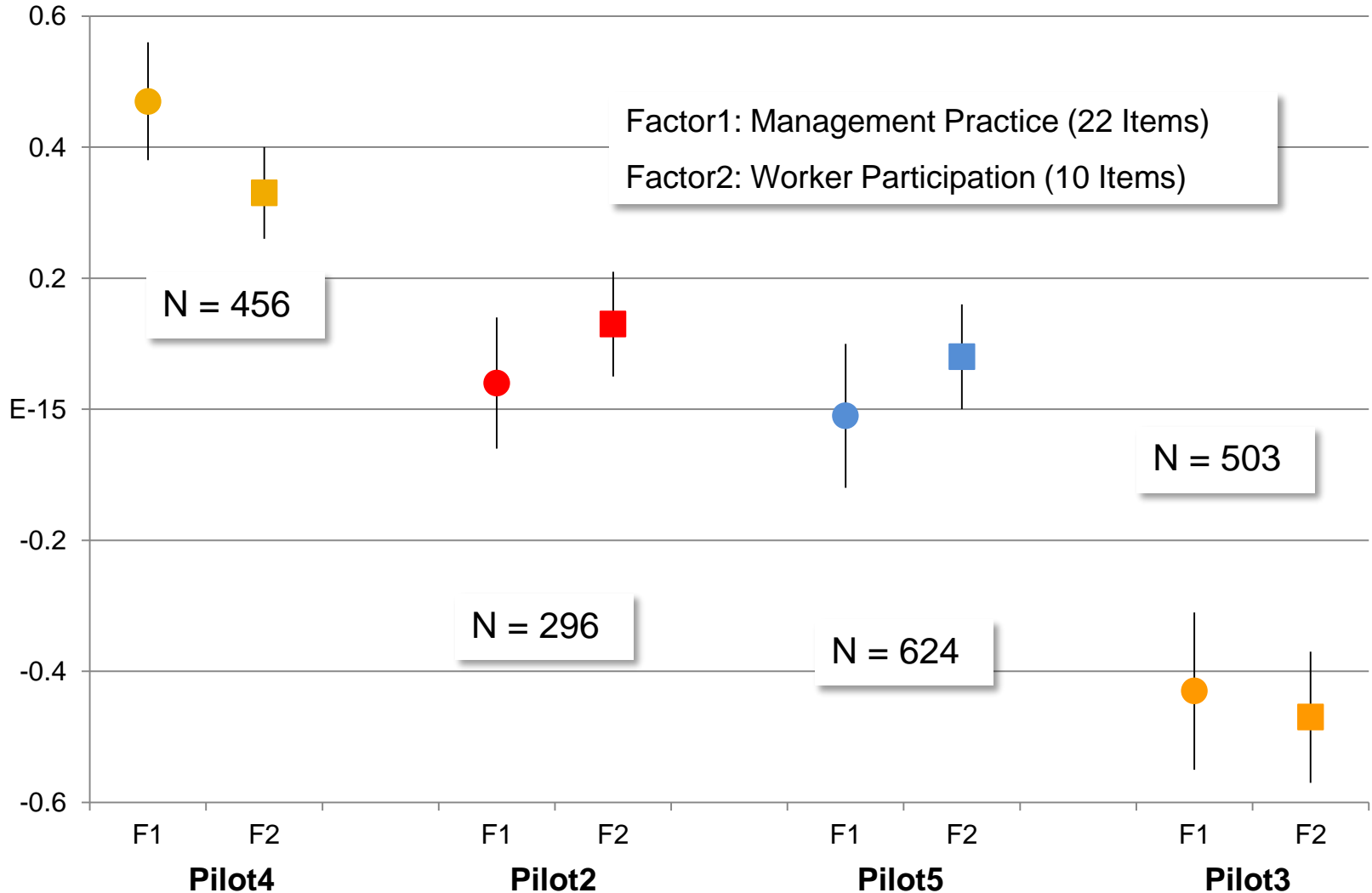


Internal Responsibility System (IRS), Underground mining, Ontario

Workplace Safety North, 4 pilot audits

Mean perception scores (standardized), Two factors, all respondents

Standardized factor score (mean=0, SD=1)



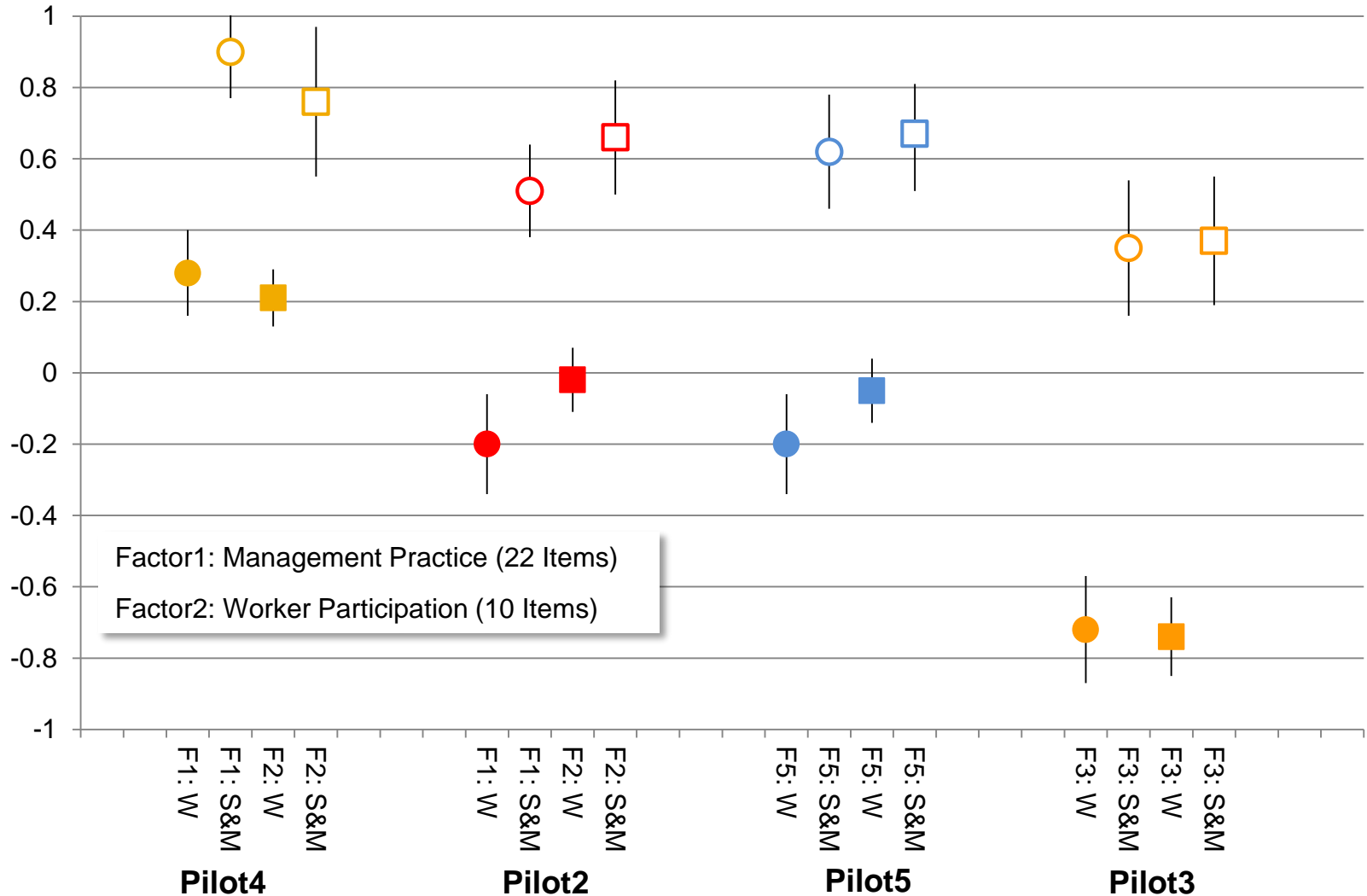
Internal Responsibility System (IRS), Underground mining, Ontario

Workplace Safety North, 4 pilot audits

Mean perception scores (standardized), Two factors,

Workers compared to Supervisors/Senior Managers

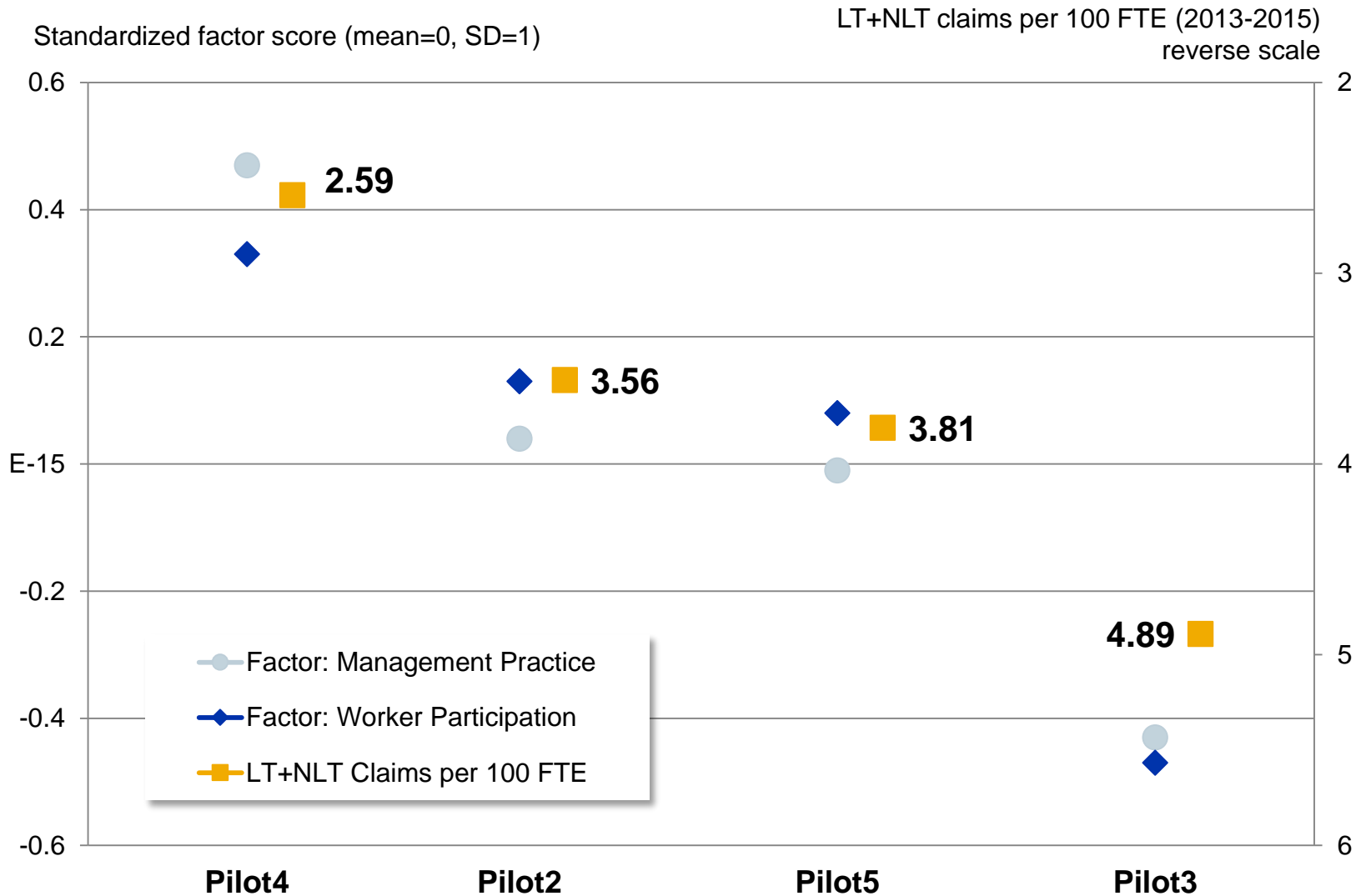
Standardized factor score (mean=0, SD=1)



Correlation of perception scores and incidence of work-related injury and illness

Internal Responsibility System (IRS), Underground mining, Ontario

Workplace Safety North, 4 pilot audits



Summary

Psychometric characteristics of 46 item questionnaire are sound.
The ten dimensions have good internal consistency

A more parsimonious questionnaire would rely on 32 items to
measure two factors

The four pilot sites are well discriminated by both the 46 item
measure and the 32 item factor solution

Worker and supervisor scores diverge with declining IRS
perception scores

The IRS perception survey is strongly correlated with the incidence
of work-related injury and illness

For discussion

The calculation of items weights for factor scores was based on all respondents, with workers representing 75% of the respondents. A different factor structure is present in analysis of supervisors/managers alone. What is the right choice here?

There is a third factor (safety as a value) which appears not to strongly discriminate the four pilot sites. What is the justification for including?

For the underground mining industry in Ontario, which of the two analytic solutions is most useful: 10 dimensions or two factors?



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