

Safety climate:

The role of leadership in enhancing workplace safety

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Overview

1 Safety Climate

2 The Leadership Literature

3 Safety Leadership Development
Results

How we got here:

What is the prevention literature saying?

Intersection with management literature

Test practical approaches to add value to prevention effort

Comprehensive safety & health

Personal
Wellness

(Health
Practices &
Lifestyles)

Organizational
Wellness

(Leadership &
Culture)

Safe & Healthy
Workplaces

Physical Work
Environment,
(Materials & Process)

Prevention: no simple answers

Multiple ingredients

Audit, inspection, prosecution, orders,
incentives, policies, standards & procedures

Training, supervision, motivation,
equipment, financial standards,
commitment

Effective leadership ties systems & people
together

Leadership: social & emotional intelligence

Understanding what is important to individuals

Speaking to it requires social/emotional awareness & takes time

Being a leader is not easy; requires self-awareness & self management

Creates a climate to explore differences

Ethics: leadership and safety

Business ethics literature dominated by high-intensity moral dilemmas

Ethical leadership is exemplified mostly in routine, low-intensity situations

Addressing employees' safety/health is a ethical daily matter (front line & corporate)

Leadership at all Levels

Networks & norms facilitate collaborative action

Norms should be framed at the top

Top leadership must be informed & be seen to listen & support constructive safety environment

Safety orientation must support & be supported by front line leaders relative to production

Flow of management & safety information

Information flow management - *who knows what & when, for information &/or action*

Differences between policy & practice
- *safety climate measurement*

What gets measured does not necessarily get done
- *reported & accountably assigned does get done*

Alf's View:

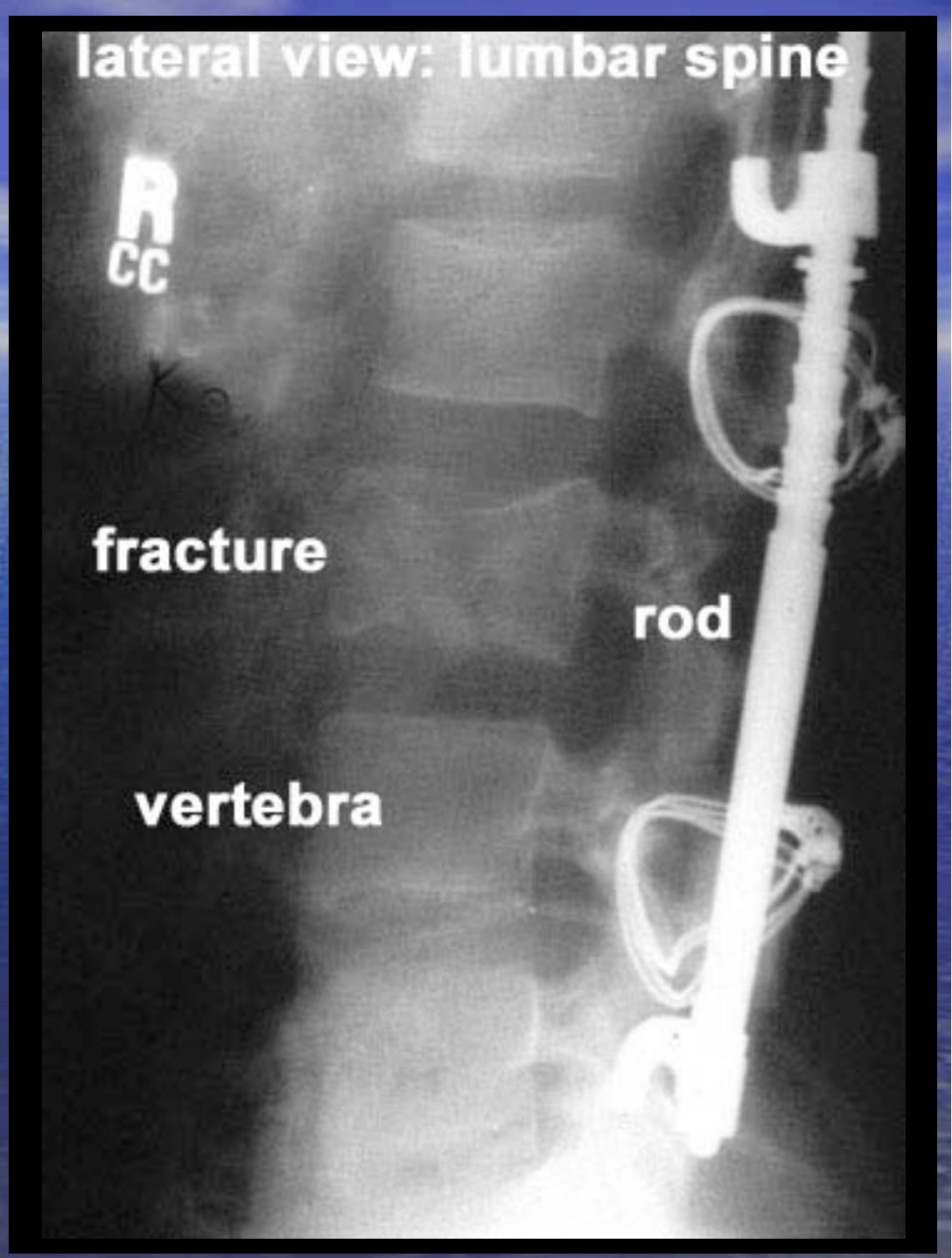
lateral view: lumbar spine

R
CC

fracture

rod

vertebra



Safety leadership message

Effective leaders monitor their team's situation to provide feedback & recognition

Feedback & recognition can be:

- *as effective a motivator as pay*
- *when people feel understood & valued*

Safety leadership accepts

Safety precautions – usually have modest & immediate cost (slower pace, extra effort, & personal discomfort)

Unsafe behaviour offers immediate rewards

Safe behavior delayed/ uncertain rewards

Safety leadership

Builds on leaders' understanding & discussing workers' views on their safety

Recognizes & accepts **bounded rationality**:

- *drives most action & is natural*
- *decision-making is based on short-term maximizing*
- *strong tendency to act unsafely in routine situations*

Accepts safety is a long term investment & that leaders must take action & are responsible

Leaders are the key to change

Leaders can reverse the payoff structure of short term versus long term

Strategic leaders should create culture

Information from random sample & confidential measurement as lever for change supported by coaching leaders

What is the difference?



Change requires

Feedback & recognition positive & negative

Framework for change demonstrated & re-enforced as it is normal to do what was always done

Leaders to listen & act

- Safety checklists formal & informal
- Hazard removal report - ideas from floor reported & reviewed
- Action on items committed to in the hazard report
- Safety talks become – discussions

Getting Started: Safety Climate Survey

Measures workplace practices, as there are often differences between policy and practice

“Through the eyes of the employees” - what is the trade off between productivity, comfort, & safety?

“Is it expected” that we will act safely?

Perceptions of firm's & leaders' approach to safety can with repeatable accuracy be measured

Leadership Development Model

**Management's true values
major influence in safety culture**

**Leadership coaching supports change via
exploring random sample data:**

Employees' perceptions: **Climate**

Observations of Leader – Staff interactions

% Safe operations



Improvement in Climate leads to reduction in injury rate

Leadership development results: NS heavy manufacturing plant

Year & half project guided by:

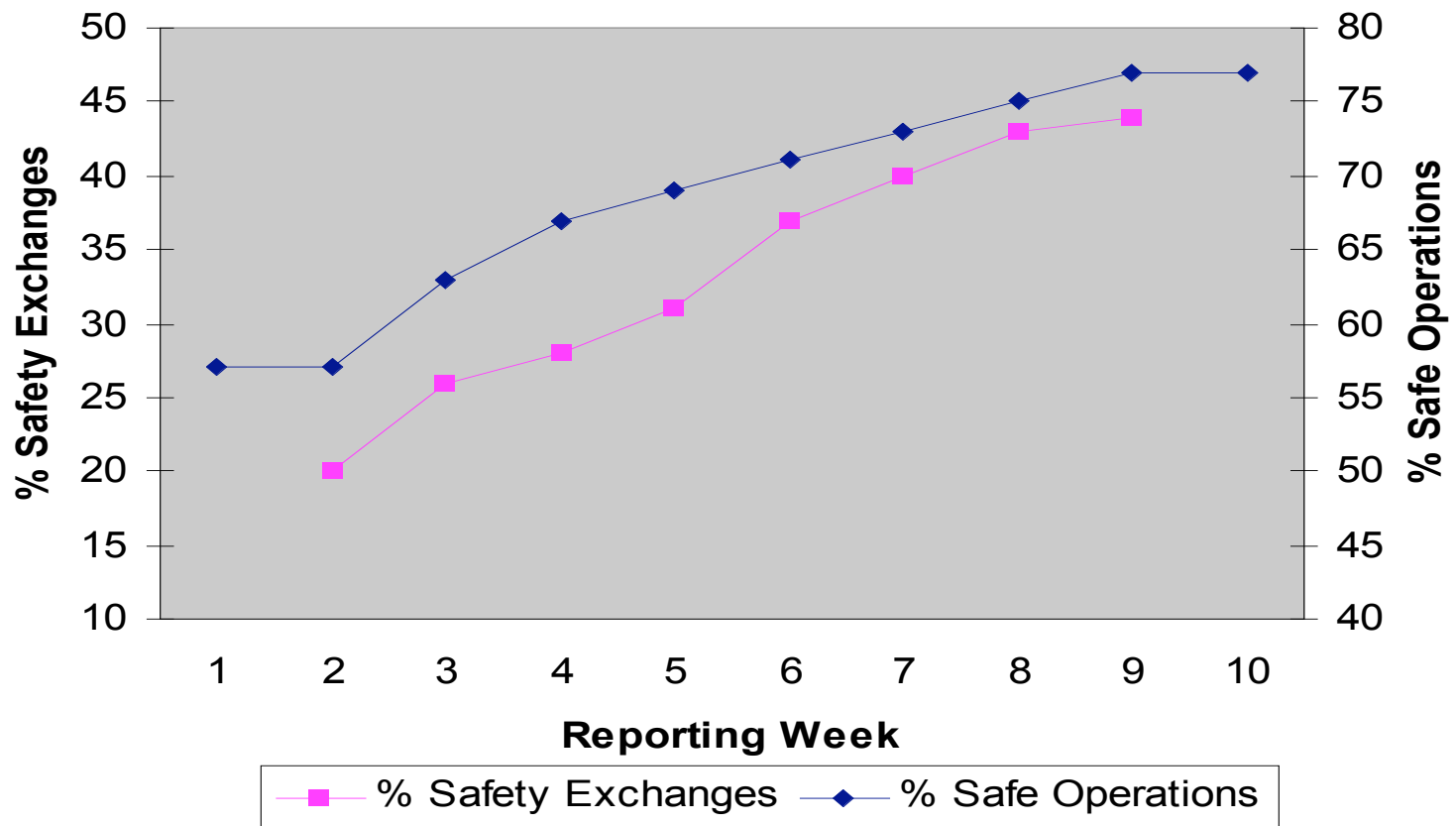
- joint labour management committee
- safety climate survey results
- random sample safety observations and
- leadership interactions observations starting at the work team and building to the organizational level

Coaching of leaders

Assisted in reducing incidents by 40%

B-Shop comparison daily safety exchanges, and % of safe operations housekeeping

Total B-Shop: Daily Safety Exchanges (DSEs) versus Safe Operations (housekeeping)



Oil Refinery

Israeli company

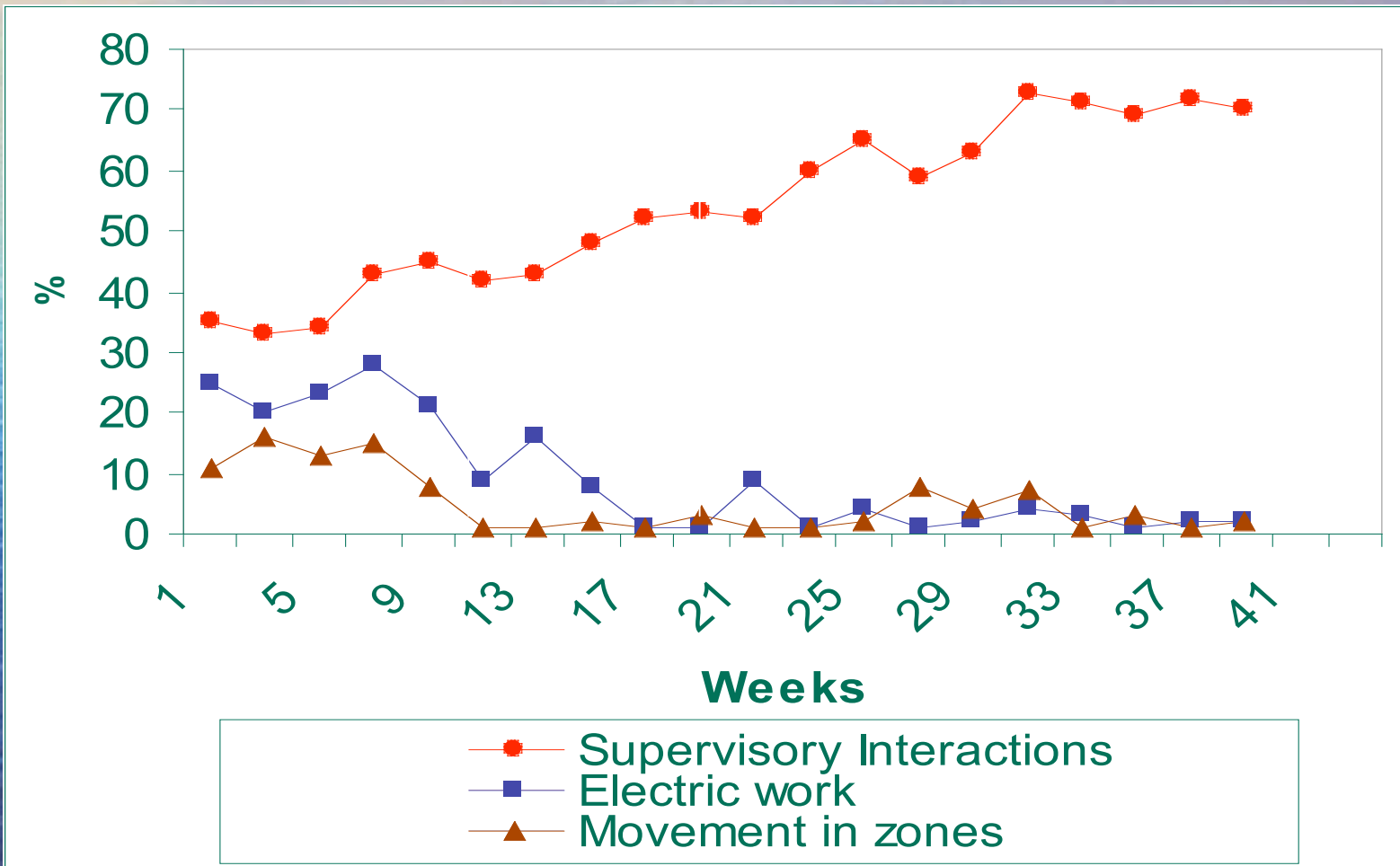
Main activities: Upgrading, canning and distribution of oil products

Results:

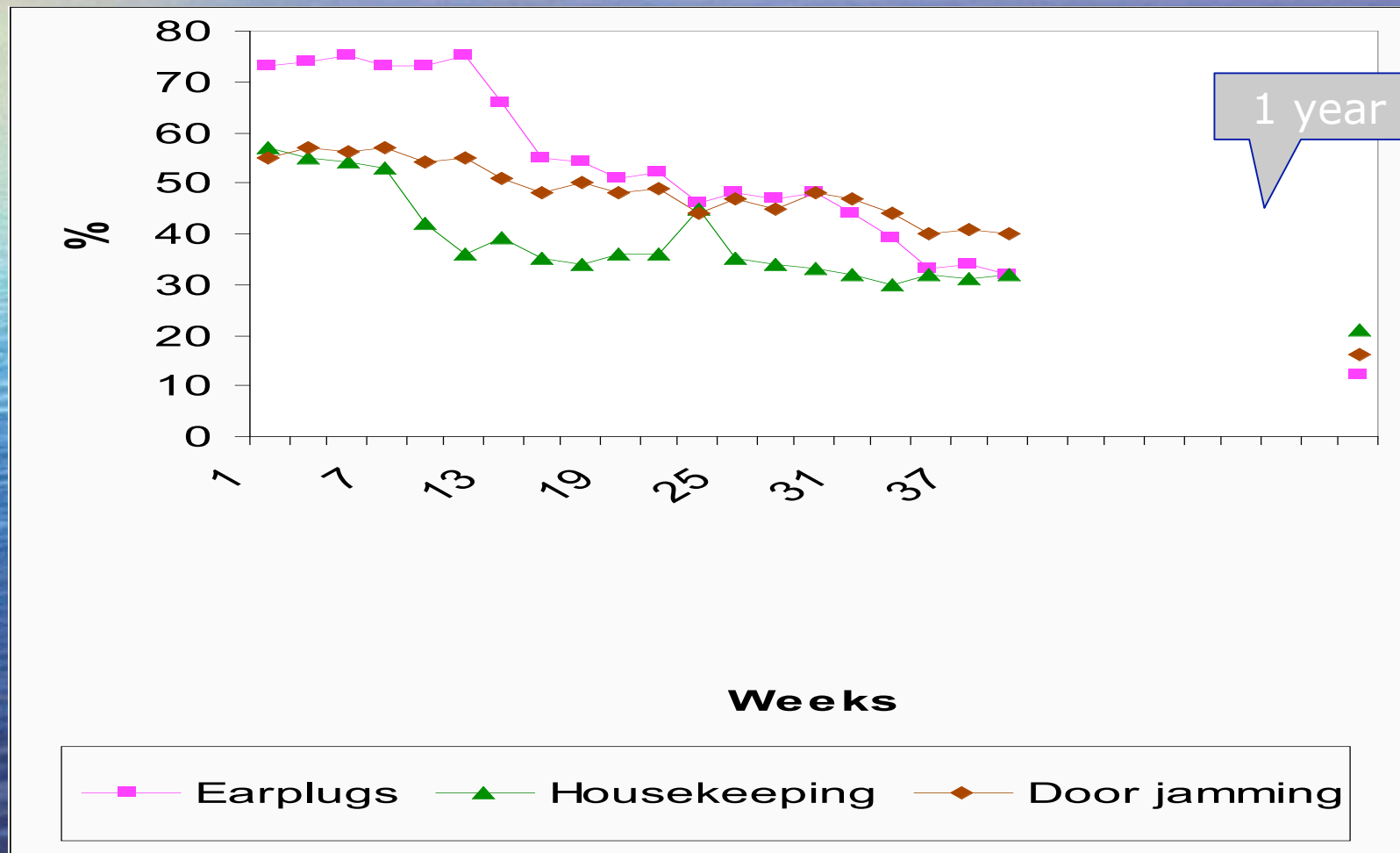
Synchronized change: Safety exchanges increased & unsafe operations decreased

Significant changes seen in **safety climate** scores during the post-intervention period

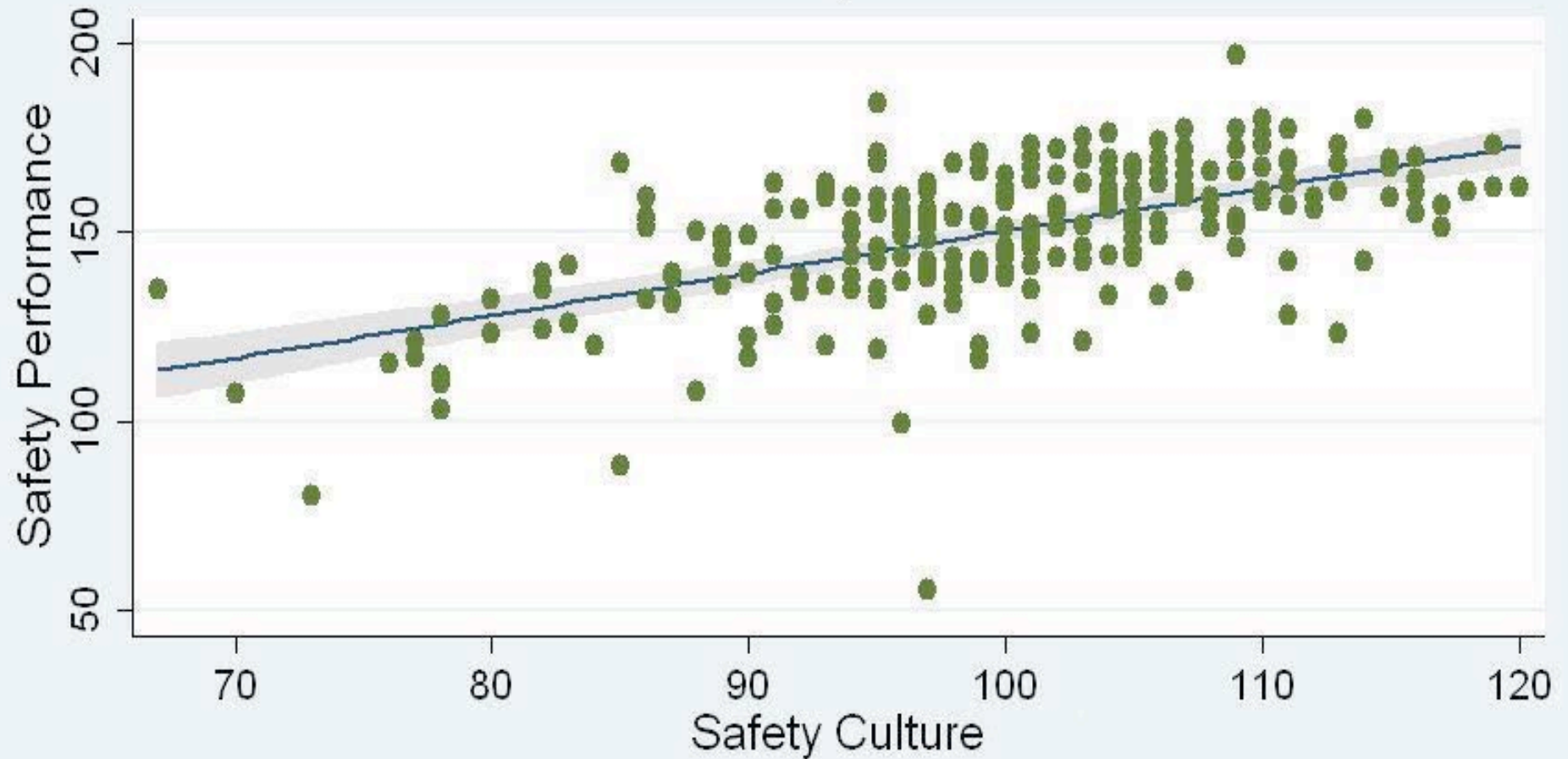
Safety exchanges & unsafe operations (%) refinery section



One year later Food-processing Company: (% unsafe) **Israeli company**



Relationship between Safety Culture and Performance

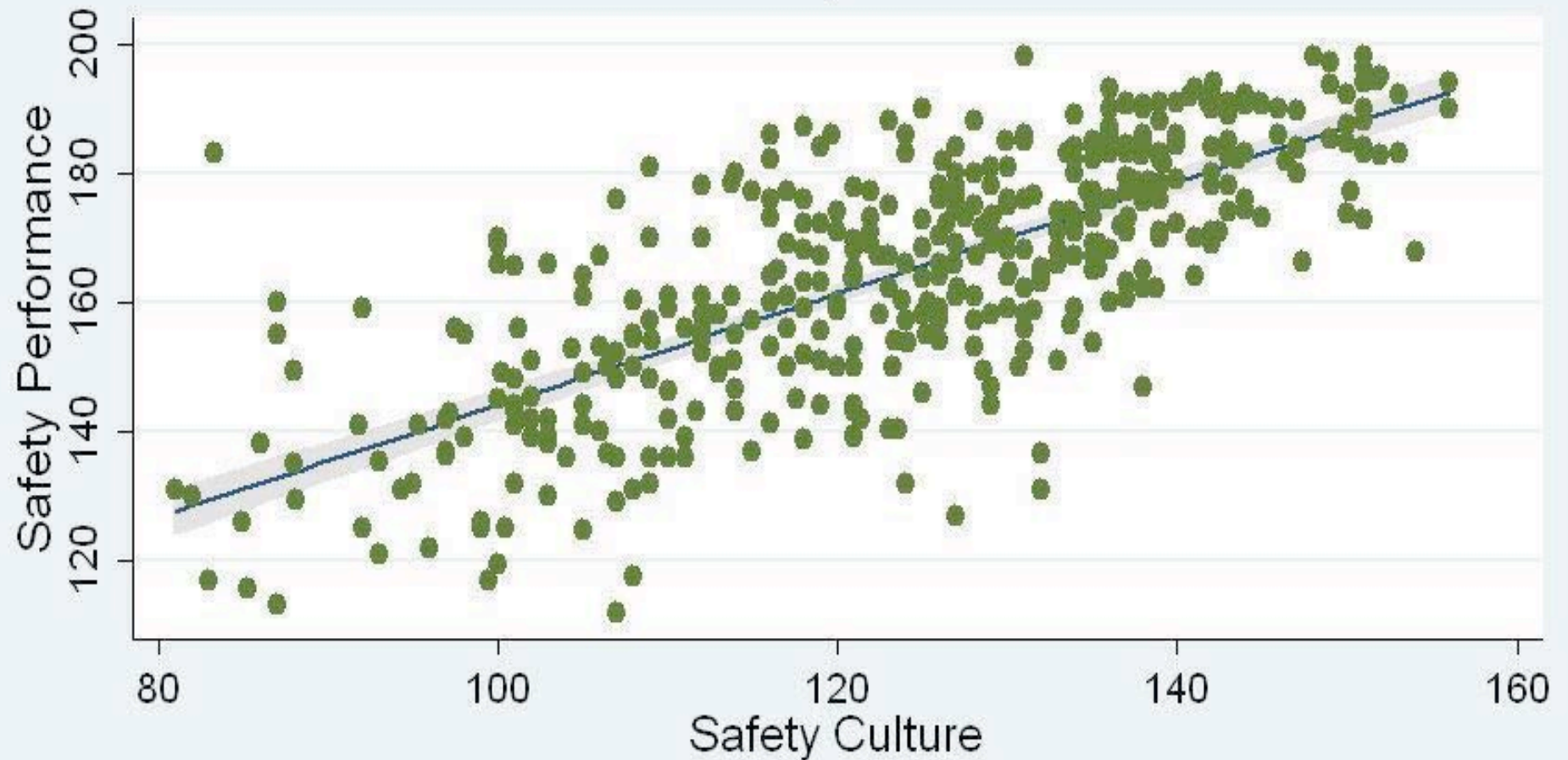


95% CI Fitted values
Range: Safety Culture (25-192); Safety Performance (33-198)

Correlation Coefficient: 0.61

Based on WorkSafe BC Lower Mainland Data Collection

Relationship between Safety Culture and Performance



95% CI Fitted values
Range: Safety Culture (62-156); Safety Performance (67-198)

Correlation Coefficient: 0.77

Based on WorkSafe BC Vancouver Island Data Collection

Research: next steps

Build Canadian data set to calibrate survey relationship to illness & injury rate

Develop cost effective survey delivery

Develop cost effective support for leaders willing to receive & use feedback

References:

- Avolio, B.J. & William, L.G. 2005, "Authentic leadership development: Getting to the root of positive forms of leadership", *The Leadership Quarterly*, vol. 16, pp. 315-338.
- Avolio, B.J. 1999, *Full leadership development : building the vital forces in organizations*, Sage Publications, Thousand Oaks, Calif.
- Bass, B.M. & Avolio, B.J. 1994, *Improving organizational effectiveness through transformational leadership*, Sage Publications, Thousand Oaks, Calif.
- Burke, M.J., Sarpy, S.A., Tesluk, P.E. & Smith-Crowe, K. 2002, "General safety performance: A test of a grounded theoretical model", *Personnel Psychology*, vol. 55, no. 2, pp. 429.
- Cherniss, C. & Goleman, D. 2001, *The emotionally intelligent workplace : how to select for, measure, and improve emotional intelligence in individuals, groups, and organizations*, 1st edn, Jossey-Bass, San Francisco.
- Goleman, D. 2006, *Social intelligence : the new science of human relationships*, Bantam Books, New York.
- Goleman, D. 1998, *Working with emotional intelligence*, Bantam Books, New York ; Toronto.
- Goleman, D. 1995, *Emotional intelligence*, Bantam Books, New York.

References: (cont'd)

- Stajkovic, A.D. & Luthans, F. 2003, "Behavioral Management and Task Performance in Organizations: Conceptual Background, Meta-Analysis, and Test of Alternative Models", *Personnel Psychology*, vol. 56, no. 1, pp. 155-194.
- Stajkovic, A.D. & Luthans, F. 1997, "A meta-analysis of the effects of organizational behavior modification on task performance, 1975-95", *Academy of Management Journal*, vol. 40, no. 5, pp. 1122.
- Velasquez, M.G. 1999, *Philosophy, a text with readings*, 7th edn, Wadsworth Pub. Co., Belmont, CA.
- Zohar, D. 2002, "Modifying supervisory practices to improve submit safety: A leadership-based intervention model", *The Journal of applied psychology*, vol. 87, no. 1, pp. 156.
- Zohar, D. 2000, "A group-level model of safety climate: Testing the effect of group climate on microaccidents in manufacturing jobs", *The Journal of applied psychology*, vol. 85, no. 4, pp. 587.
- Zohar, D. & Luria, G. 2005, "A Multilevel Model of Safety Climate: Cross-Level Relationships Between Organization and Group-Level Climates", *The Journal of applied psychology*, vol. 90, no. 4, pp. 616.



Questions & Comments welcomed
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