



# Psychosocial Factors – Impact on Disability and Claims Costs

July 10, 2024

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# Past and Upcoming Webinars

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- Oct 3, '23 – Realities of an Aging Workforce
  - Nov 7, '23 – Indoor Heat Illness Standards
  - Dec 5, '23 – This Might Hurt: An Introduction to Back Pain
  - Jan 10, '24 – Wearables: What to Watch and Watch Out For
  - Feb 6, '24 – Workplace Violence Prevention: Essential Elements & New Regulations
  - Apr 10, '24 – Sleep Smart – Work Safe: Unraveling the Impact of Tough Schedules
  - May 28, '24 – Ergonomics for Mental Health
  - Jun 18, '24 - Measuring Safety Climate (& Indoor Climate)
  - **Jul 10, '24 – Psychosocial Factors – Impact on Disability (and Claims Costs)**
  - Aug 6, '24 – You've been taught the WRONG way to lift!
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# Session Overview

Descriptions of Psychosocial Factors

Early Origin – Boeing Study

Direct Supervision

Stress

Self-Efficacy

Measurement Tools

Suggested “Measurements”

Doing what you know you should do...

# What are psychosocial factors? (It depends on who you ask.)

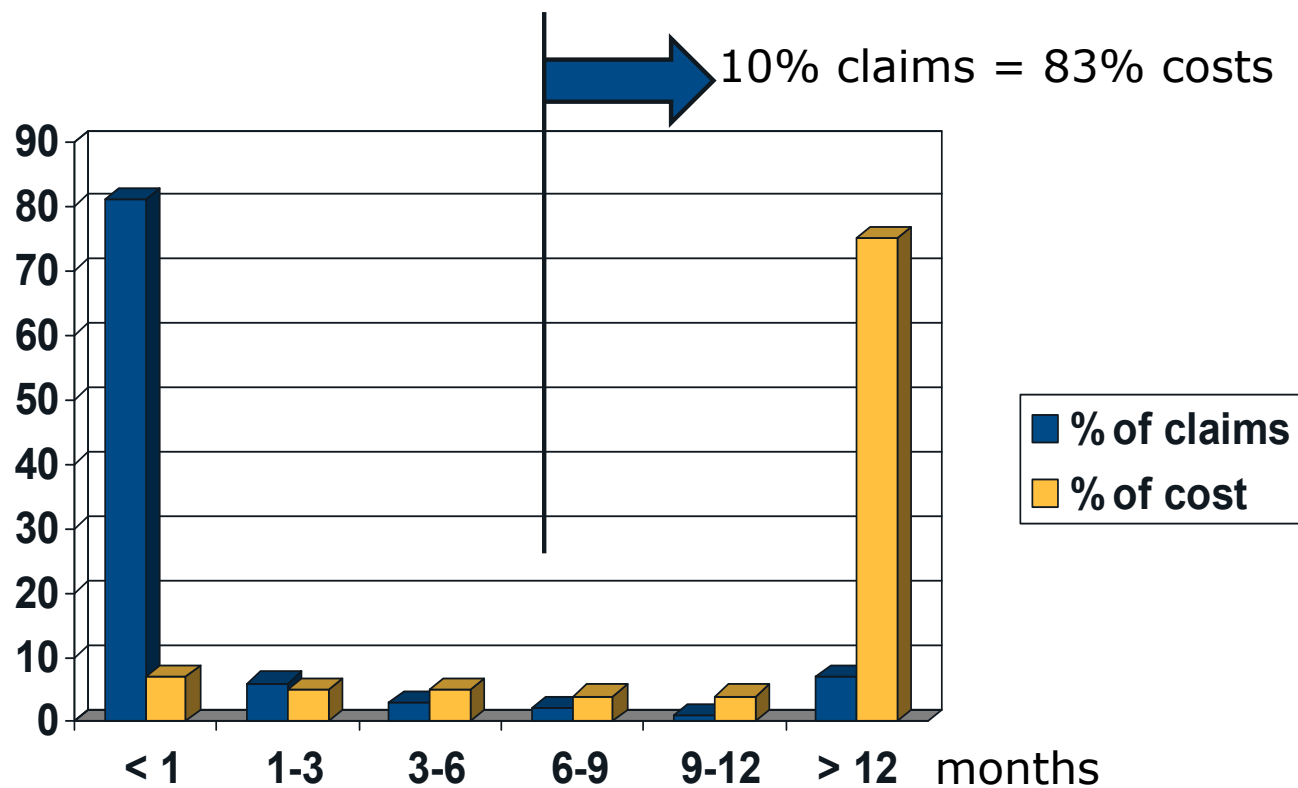
The World Health Organization (2010) talks about “Psychosocial Hazards” – “...those aspects of the design and management of work, and its social and organisational contexts that have the potential for causing psychological or physical harm” (Cox & Griffiths, 2005).

Medical field: “...any exposure that may influence a physical health outcome through a psychological mechanism.”

## **My Description**

**“Any non-physical influence on a worker’s health, safety, or well-being.”**

## Distribution of **LBP\*** WC claims & costs by duration of work absence



Hashemi et al., 1997, J Occup Environ Med, 39(10), 937-945.

## So, What affects length of disability?

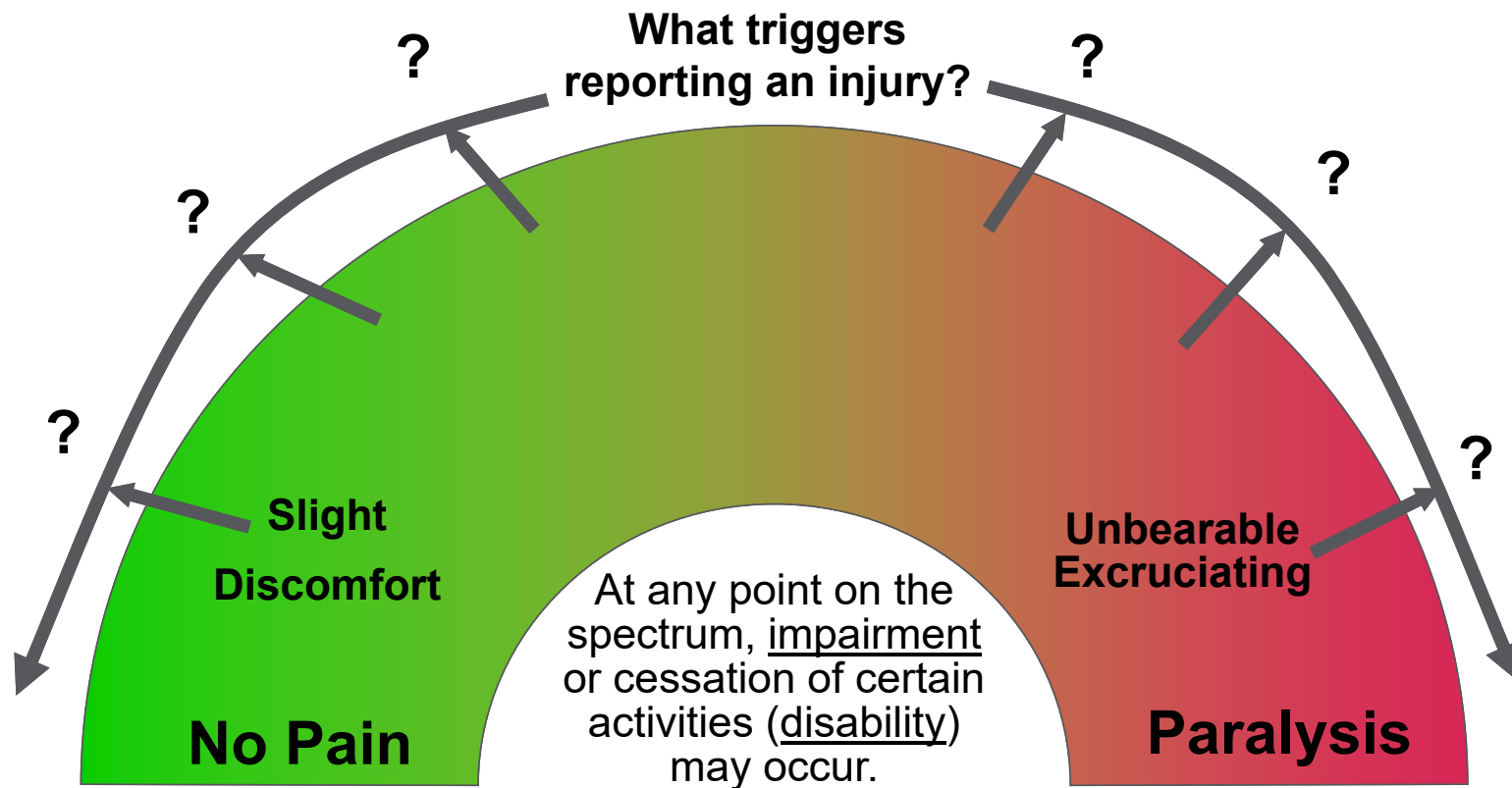
Severity  
of Injury

What  
else?

# Spectrum Of Pain

Adapted from Volinn, 2006, Waddell and Burton, 2001, and Waddell et al., 2002

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# Prospective Study of Work Perceptions and Psychosocial Factors Affecting the Report of Back Injury

Bigos, et al., 1991



- Boeing – 3,020 Employees
- Data on individual, physical, psychosocial and workplace factors collected at baseline
- 4-years of injury data
- 279 New Back Pain Reports
- Psychosocial statements used from the Minnesota Multiphasic Personality Inventory included:
  - **“I enjoy the tasks involved in my job”**
- Strongest Correlations:
  - Prior Back Pain History
  - **“Hardly Ever” enjoyed job tasks (2.5 Times more likely)**
    - **STRONGER correlation than all other factors!**

**1<sup>st</sup> Key Factor:  
Job Task  
Enjoyment**



# **Musculoskeletal Disorders and Workplace Factors NIOSH (97-141) - 1997**

“While the etiologic mechanisms are poorly understood, there is increasing evidence that psychosocial factors related to the job and work environment play a role in the development of work-related musculoskeletal disorders (MSDs) of the upper extremity and back.”

**Musculoskeletal  
Disorders and  
Workplace  
Factors  
NIOSH (97-141)  
- 1997**

Perceptions of intensified workload

Monotonous work

Limited job control

Low job clarity

Low social support

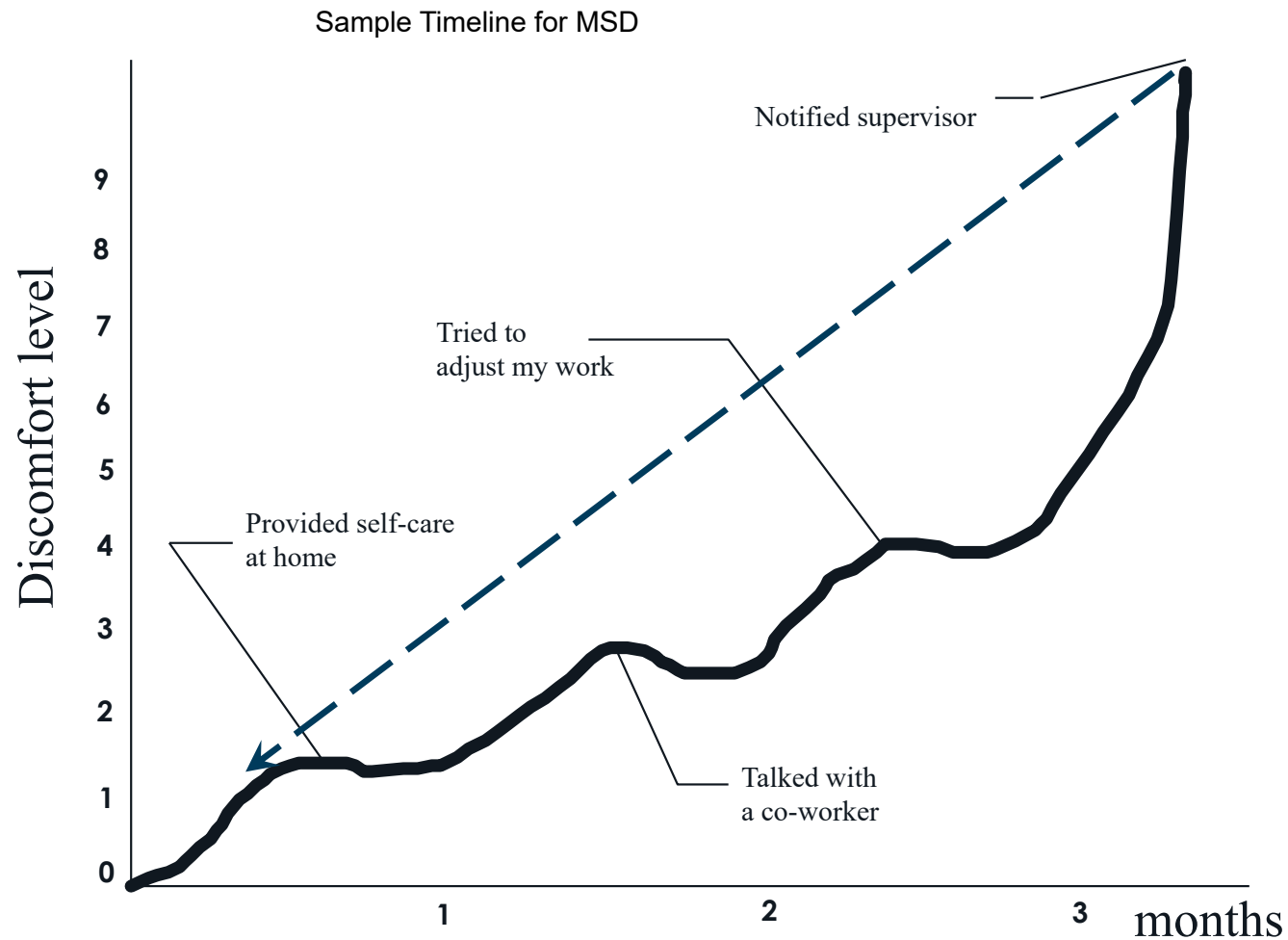
# What Affects Lost Work Time for MSDs?

- Many workers report indifference or hostility from supervisors after reporting Musculoskeletal pain and discomfort (Strunin & Boden, 2000).
- Workers with disabling conditions list responsiveness of their supervisors as a major determinant in their decision to return to work (Akabus & Gates, 1991).

## Insight from Interviews

### Employee perceptions that supervisors:

- Blamed the worker for the injury
- Never contacted the worker after the injury
- Didn't speak with the worker privately
- Discouraged the worker from filing a claim
- Didn't believe the symptoms were real
- Were angry with the worker for being injured
- Didn't try to work out solutions with the worker



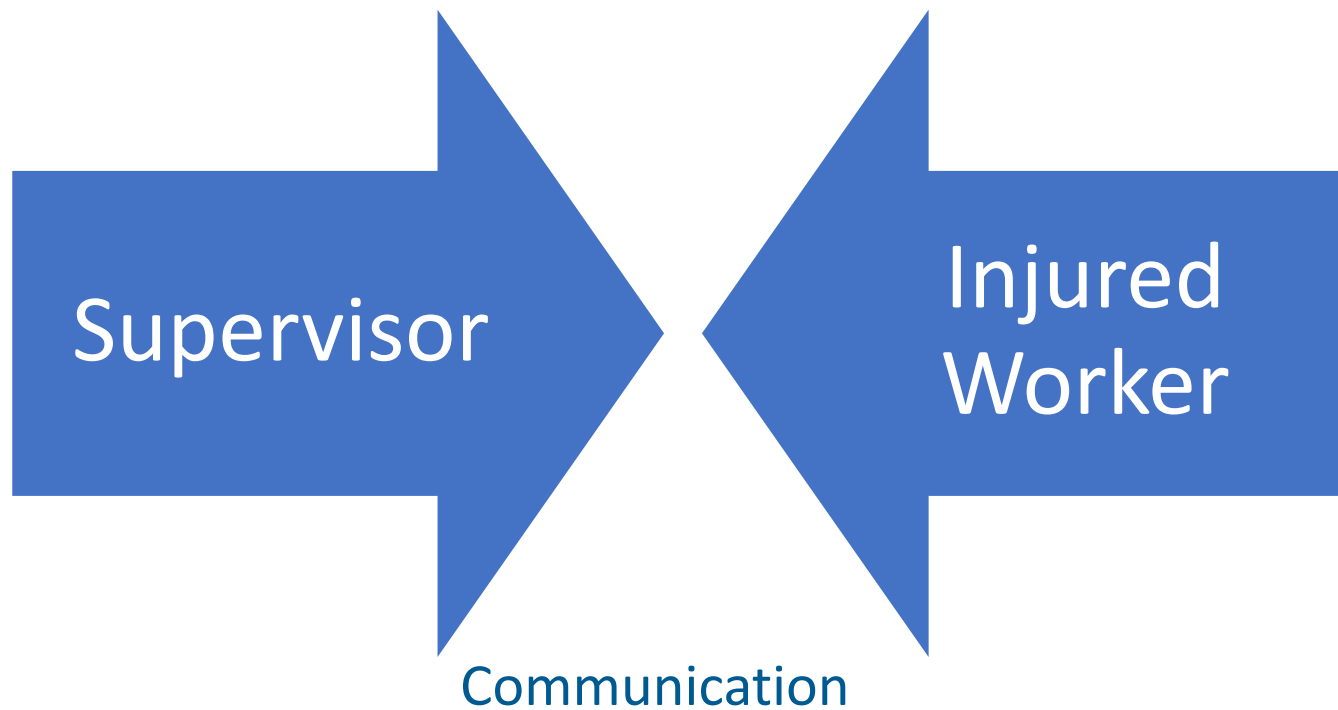
## GRADUAL ONSET OF MUSCULOSKELETAL PAIN

**Source:**

Dr. William Shaw, Liberty Mutual Research Institute. Loosely based on Tveito, T.H.I., et al., 2010. Managing pain in the workplace: a focus group study of challenges, strategies and what matters most to workers with low back pain. *Disability and Rehabilitation*, 32(24), 2035-2045.

# The Supervisors Role

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**Supervisor  
Training to  
Optimize  
Response to  
Worker Injuries\***  
**Shaw, et al., 2006**

- **Large Food Processing Plant**
- **Supervisors randomly divided into two groups (11&12 each)**
- **First group Trained, Second group cross-over control (7-month delay)**
- **4 hours of Content in two 2-hour sessions:**
  - **Communication skills and Respect of Injured worker**
  - **Ergonomic Accommodations for Injured Workers**

\*Received NIOSH's 2008 National Occupational Research Agenda (NORA) Innovative Research Award for Worker Health and Safety



# Supervisor Training Program Emphasis

## Immediate contact

- No blame
- Positive, empathetic
- “Want you back”

## Ergonomics/safety education

- Problem-solving
- Accommodations

## Regular follow-up

- Functional inquiry

**Supervisor  
Training to  
Optimize  
Response to  
Worker Injuries\***  
**Shaw, et al., 2006**

# Results!

Claims 7 months before  
and after workshop

- **47% reduction in new LT Claims**
- **80% reduction in new LT indemnity costs!**

\*Received NIOSH's 2008 National Occupational Research Agenda (NORA) Innovative Research Award for Worker Health and Safety

# Overall Conclusions From Research

**Supervisors have a critical role in disability prevention**

Immediate response by supervisor to workers reporting work-related injury significantly influences length of disability

Supervisor attitudes and practices can impede return to work and rehabilitation for injured workers

Timely & appropriate communication with employees by supervisors is essential

Use ergonomic principles to accommodate disabled employees and facilitate return to work

**A well-trained supervisor will significantly reduce cost of lost time**

# Key messages for supervisors

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**Invite  
complaints/  
early reporting**

**Listen to worker  
concerns**

- privately,  
confidentially

**Support and  
reassurance**

- “We want you  
back”

**Maintain  
contact during  
work absence**

**Catalog job tasks  
and limitations**

**Engage  
collaborative  
problem-solving**

**Suggest  
temporary work  
modifications**

# **2nd Key Factor: Supervisor Skill**

## The Back Disability Risk Questionnaire for Work-Related Acute Back Pain: Prediction of Unresolved Problems at 3-Mo. Follow-Up

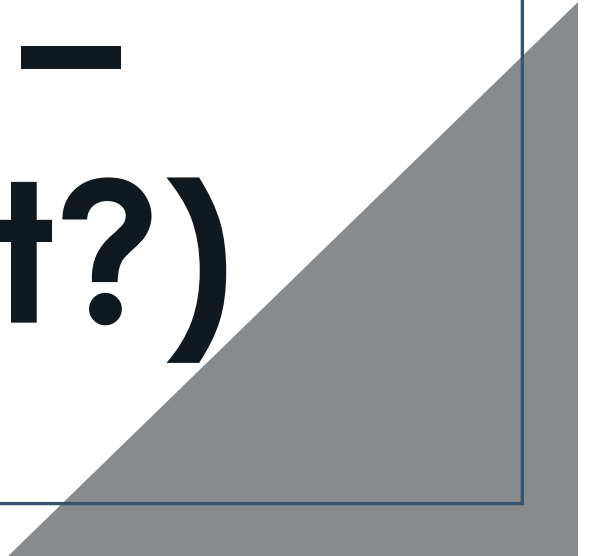
Shaw, et al., 2009

- 519 Working Adults seeking care for Acute BP
- Clinician Estimates: No association w/ outcomes
- Strongest Correlations:
  - *Prior Back Surgery* (RR=3.92)
  - ***Felt Under Stress Most or All of the Time*** (RR=4.45)

See also:

- Harris-Adamson, et al., 2013. Personal and Psychosocial Risk Factors for Carpal Tunnel Syndrome: A pooled Study Cohort.
- Gerr, et al., 2014. A Prospective Study of Musculoskeletal Outcomes Among Manufacturing Workers: II. Effects of Psychosocial Stress and Work Organization Factors
- Kristman, et al. 2016. Researching Complex and Multi-Level Workplace Factors Affecting Disability and Prolonged Sickness Absence and
- Thiese, et al., 2020. Psychosocial Factors and Low Back Pain Outcomes in a Pooled Analysis of Low Back Pain Studies.

**3rd Key Factor:  
Job Stress  
(flip side of #1 –  
Job Enjoyment?)**



# Historical Tools for Measuring Work Stress



**1996**

Siegrist's (1996) Effort-Reward Imbalance (ERI)



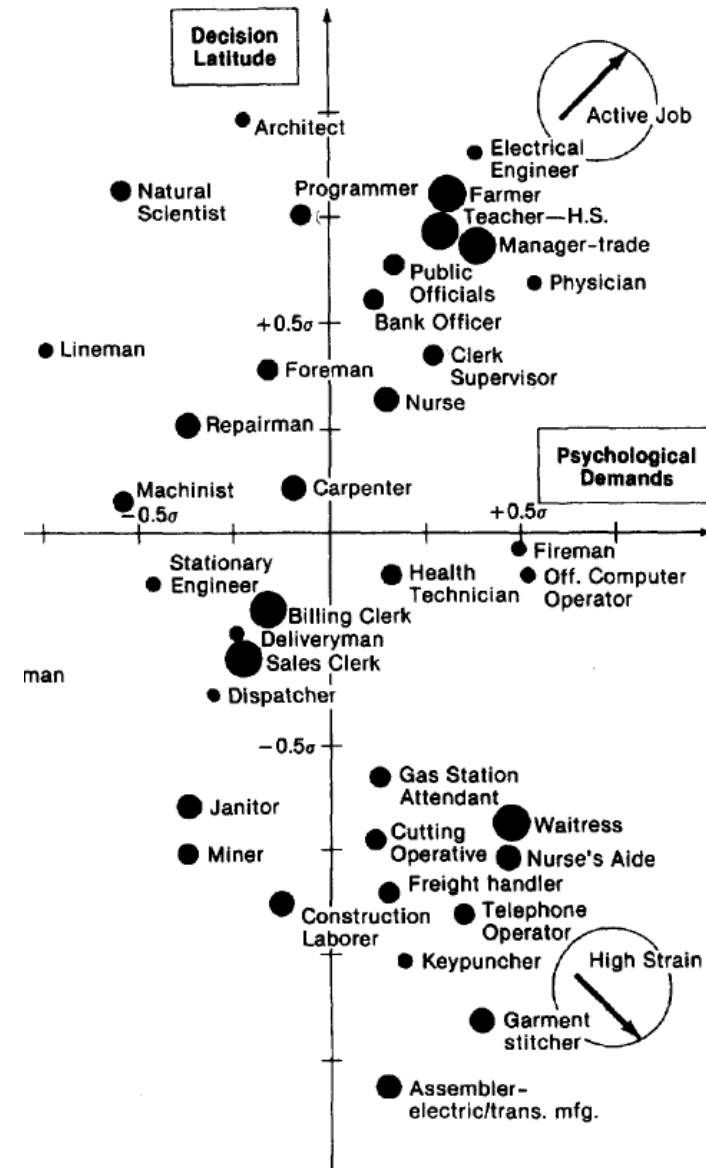
**1998**

Karasek's (1998) Job Content Questionnaire (JCQ)



# Job Content Questionnaire Karasek, et al., 1998

- Questions that address job-related psychological demands, decision latitude, social support, physical demands, and job insecurity
- Most widely used instrument.
- Self-assessed questions.
- 27 questions (Full versions – 49 up to 112)
- Scoring maps to dimensions of decision latitude and job (psychological) demands



## Job Content Questionnaire Sample Questions

Most question responses are on a 4-point scale: Strongly Disagree, Disagree, Agree, Strongly Agree

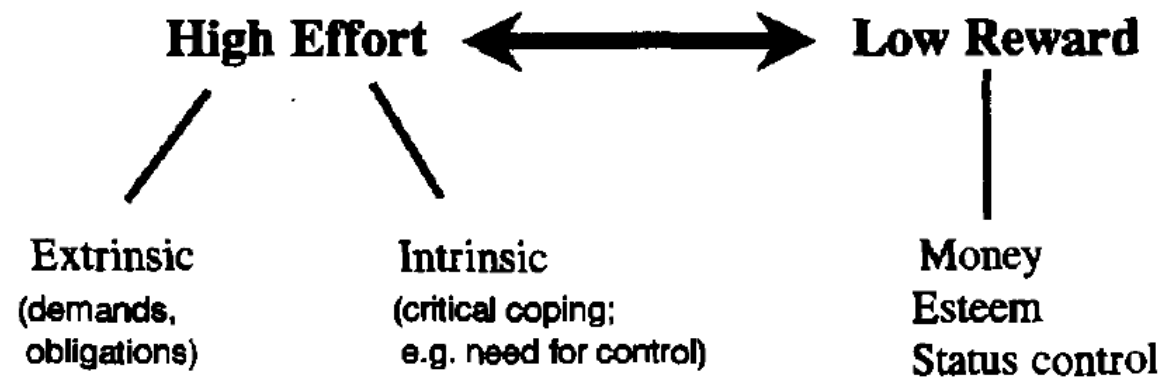
"My job requires that I learn new things."

"I have significant influence over decisions in my work group or unit."

"My supervisor is concerned about the welfare of those under him."

## Effort-Reward Imbalance Siegrist 1998

- Questions (Agree/Disagree) in 5 areas:
  - Extrinsic Effort
  - Esteem Reward
  - Monetary Reward
  - Status Reward
  - Overcommitment (added later)
- Mostly applied to Cardiovascular Health



*Figure 1.* The effort–reward imbalance model at work.

## **Effort – Reward Imbalance Sample Questions**

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“I have constant time pressure due to a heavy work load.”

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“I receive the respect I deserve from my superiors.”

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“Considering all my efforts and achievements, my salary / income is adequate.”

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“Considering all my efforts and achievements, my work prospects are adequate.”

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# A “New” Tool

## **LM Safety Climate Survey**

- Based on Zohar and Luria's (2005) safety climate (SC) scale
- 8-item and 4-item Organizational and Group-Level Scales
- 5-point Likert scale (e.g., Strongly Disagree, Disagree, Neither Agree or Disagree, Agree, Strongly Agree)

# An item-response theory approach to safety climate measurement: The Liberty Mutual Safety Climate Short Scales (Huang, et al., 2017)



## Top management at this company:

Statement	Strongly Agree (5 Points)	Agree (4 Points)	Neutral (3 Points)	Disagree (2 Points)	Strongly Disagree (1 Point)
Tries to continually improve safety levels in each department.					
Requires each manager to help improve safety in his or her department.					
Uses any available information to improve existing safety rules.					
Provides workers with a lot of information on safety issues.					

## My direct supervisor:

Statement	Strongly Agree (5 Points)	Agree (4 Points)	Neutral (3 Points)	Disagree (2 Points)	Strongly Disagree (1 Point)
Discusses how to improve safety with us.					
Uses explanations (not just compliance) to get us to act safely.					
Reminds workers who need reminders to work safely.					
Makes sure we follow all the safety rules (not just the most important ones).					

**One more factor  
to consider**



**Dr. Gordon Waddell -  
orthopedic surgeon -  
led the evidence  
review team for the  
U.K. guidelines,  
under the Royal  
College of General  
Practitioners (1996)**

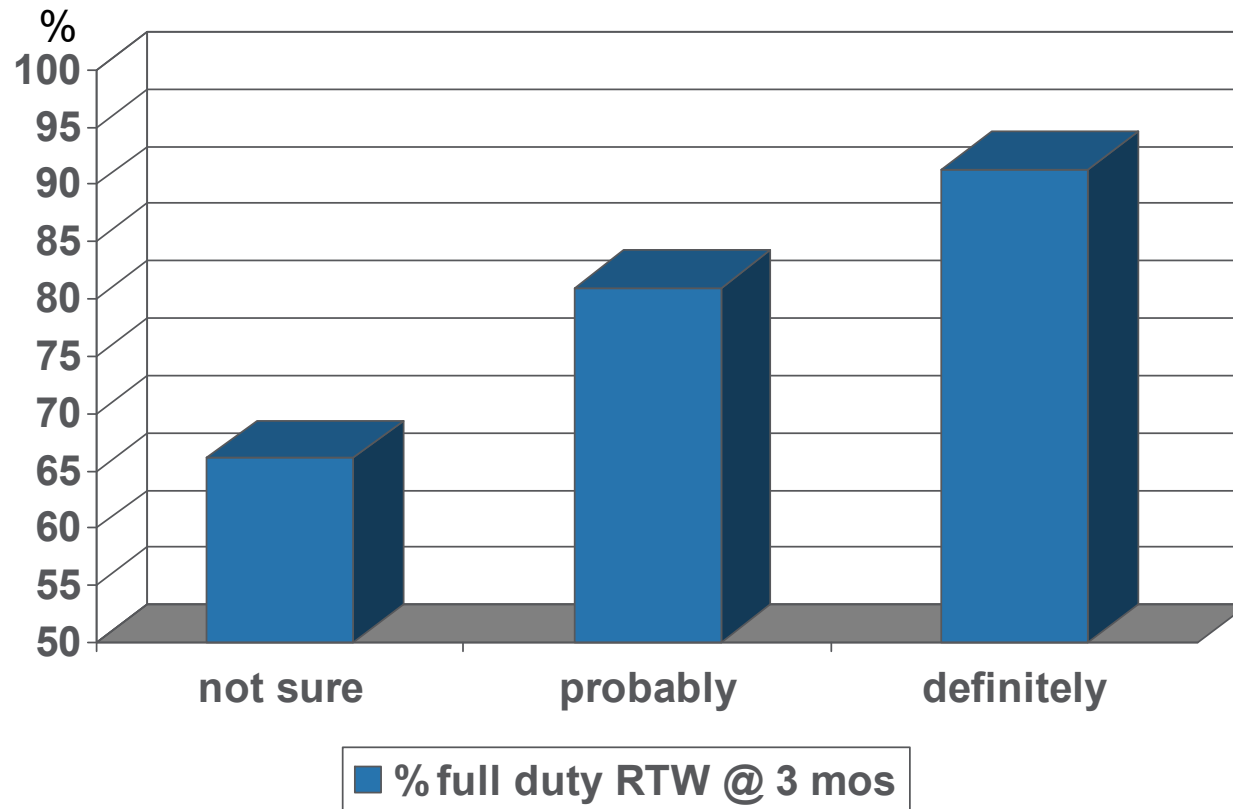
*“Clinical impression and psychological studies suggest that patients who accept personal responsibility for their pain do better than those who leave it to others. Those who feel it is entirely up to doctors or therapists or someone else to cure them do worse”*

*Waddell, 2004 The Back Pain Revolution*



# RTW expectations and RTW

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N = 561 adults with work-related acute LBP (Shaw et al., JOEM 2009)

See also Young, et al., 2017 Journal of Occupational Rehabilitation

**Self-efficacy is more important than fear of movement in mediating the relationship between pain and disability in chronic low back pain.  
Costa, et al., 2011**

- Pain Self-Efficacy = Confidence I (myself) have ability to achieve pain reduction
- Fear of movement = if I move, my pain will get worse
- **ONLY Pain Self-Efficacy mediated pain and disability in the long-term.**

**Individual recovery  
expectations and  
prognosis of outcomes  
in nonspecific low  
back pain: prognostic  
factor review  
Hayden, et al., 2019**

- 52 Studies Reviewed
- Conclusion:  
**“People with low back pain who have positive expectations of their own recovery are more likely to return to work and to recover from pain and increase the activities they are able to do.”**

# **4th Key Factor: Self-Efficacy**

A gray right-angled triangle is positioned in the bottom right corner of the slide, partially overlapping the white rectangular area and the light gray background.

# Recap

– the Fab  
Four Factors

Job Task Enjoyment

Supervisor Skill

Job Stress

Self-Efficacy

# **Liberty Mutual Safety Climate Short Scales**

## **Two Suggested Measurements**

Survey using the following 5-point Likert scale statements (e.g., Strongly Disagree, Disagree, Neither Agree or Disagree, Agree, Strongly Agree):

- “I enjoy the tasks involved in my job.”
- “My supervisor genuinely cares about my well-being by listening empathetically and taking action on my behalf.”
- “In my job I feel under stress most or all of the time.”
- “When I have back or other muscle pain, I know I can recover quickly.”

# Do what you know you should do:

Answering these questions  
will reduce injuries, lost  
time, and workers  
compensation costs!

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What helps people enjoy their tasks?

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How can you get supervisors to respond to  
worker pain empathetically?

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What can you do to reduce worker stress?

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How can you empower workers to have  
confidence in their own self-efficacy?

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Are you ready to measure and work on  
your safety climate?

# Questions

