

Evaluation of the Foundations for Safety Leadership Training Module

Natalie Schwatka, PhD

Acknowledgements

Co-PIs - Linda Goldenhar & Stefanie Johnson

Marissa Beldon

Jamie Tessler

Jack Dennerlein

Mark Fullen

Dan Weinstein

Hao Treu

Curriculum development team

Graduate students

FSL trainers



This project was supported by CPWR: The Center for Construction Research and Training, NIOSH cooperative agreement OH009762. The contents are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH.

Safety leadership

- Multi-dimensional construct
- Transformational leadership style most commonly studied
- Related to a variety of outcomes:
 - Safety climate
 - Safety practices (especially participatory practices)
 - Occupational injuries



Safety leadership intervention research

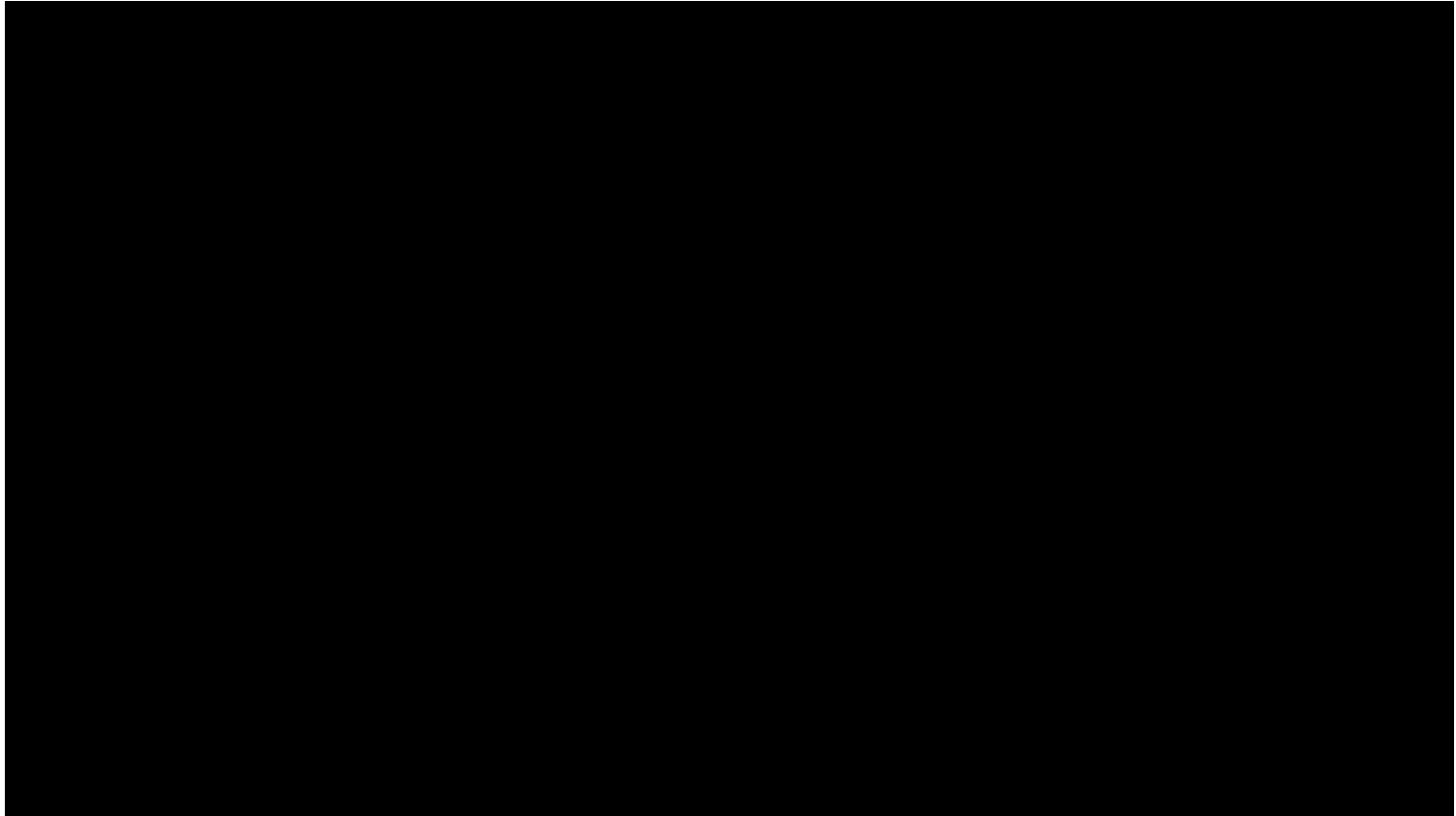
Prior intervention formats:

- No training, but on-going feedback on safety communication
- 1 / 3 / 20 / 180 day trainings
 - Lecture
 - 360 feedback
 - On the job practice
 - Worker involvement

Observed outcomes:

- Leader
 - Safety attitudes
 - Self-efficacy
 - Intentions to promote safety
 - Leadership practices
- Worker
 - Safety communication
 - Safety climate

Foundations for Safety Leadership



Foundations for Safety Leadership

- **3 Hour Training**

- Foundational material (1 hour)
 - Cost of ineffective leadership
 - Benefits of effective leadership
 - 5 safety leadership skills, etc.
- Applying skills (2 hours)
 - 7 real world construction scenarios
 - Animated videos, Reading, Role Plays
 - Discussion questions

Foundations for Safety Leadership

7. Fritz's Shortcut

| Who | Role |
|--------|--------------------------------------|
| Fritz | Mighty Mechanical Foreman |
| Elliot | Mighty Mechanical Experienced Worker |

WATCH READ PLAY



BE A SAFETY LEADER

LEAD BY EXAMPLE: Make safety a core value by "walking the talk" and reinforcing the idea that everyone owns safety.

ENGAGE TEAM MEMBERS: Engage, encourage, and empower team members to identify and act upon unsafe situations.

ACTIVELY LISTEN AND PRACTICE 3-WAY COMMUNICATION: Actively listen and practice three-way communication by having people repeat the message heard.

DEVELOP TEAM MEMBERS THROUGH TEACHING, COACHING, AND FEEDBACK: Act as a teacher and coach. Give FIST feedback (Facts, Impact, Suggestions, Timely).

RECOGNIZE TEAM MEMBERS FOR A JOB WELL DONE: Publicly and privately acknowledge team members when they consistently work safely and contribute to a positive safety climate.

FSL evaluation study

*Compared to the group **without** FSL training, the group **with** FSL training will report better...*

Leaders

- Understanding of the safety leadership skills
- Use of safety leadership practices
- Use of safety practices
- Worker reporting of safety-related conditions

Workers

- Leader's use of safety leadership practices
- Safety climate
- Use of safety practices
- Their reporting of safety-related conditions

All on a 1-5 Likert scale

Study Recruitment

- Maximize generalizability
- Selection criteria for 20 companies: Geographic location, Risk, Union status, Business size
- Randomization into training group

Early FSL training



Lagged FSL training



Data analysis

Hierarchical linear regression to account for repeated measures

Model 1: Time

Model 2: Time + Intervention group + Time*Intervention group

Control group analysis
Sustained impact analysis

Early FSL training



Lagged FSL training



Sample Companies

| | Early (#) | Lagged(#) | Total N (%) |
|--|-----------|-----------|-------------|
| Geographic location | | | |
| West (Denver area) | 7 | 7 | 14 (70%) |
| Midwest (Pittsburgh, PA/Morgantown WV) | 1 | 2 | 3 (15%) |
| Northeast (Boston area) | 2 | 1 | 3 (15%) |
| Size (self-reported) | | | |
| Small | 2 | 3 | 5 (25%) |
| Medium | 4 | 6 | 10 (50%) |
| Large | 4 | 1 | 5 (25%) |
| Union status | | | |
| Non-union | 6 | 5 | 11 (55%) |
| Union | 4 | 5 | 9 (45%) |
| Trade risk level | | | |
| Low risk | 7 | 2 | 9 (45%) |
| High risk | 3 | 8 | 11 (55%) |

Sample

Leaders and workers



Total Sample

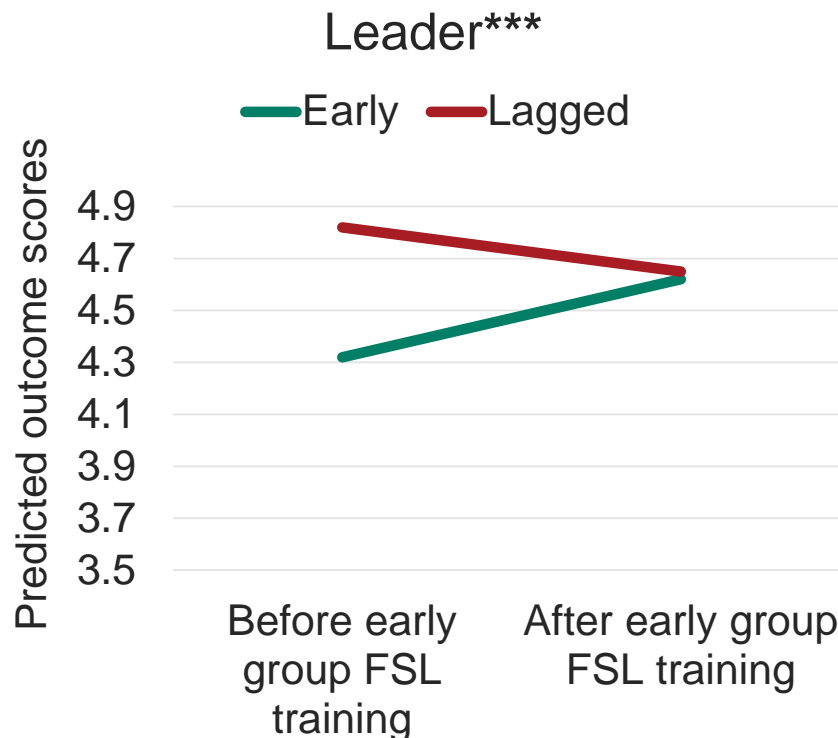
286 Leaders & 1173 Workers

Response rate over time

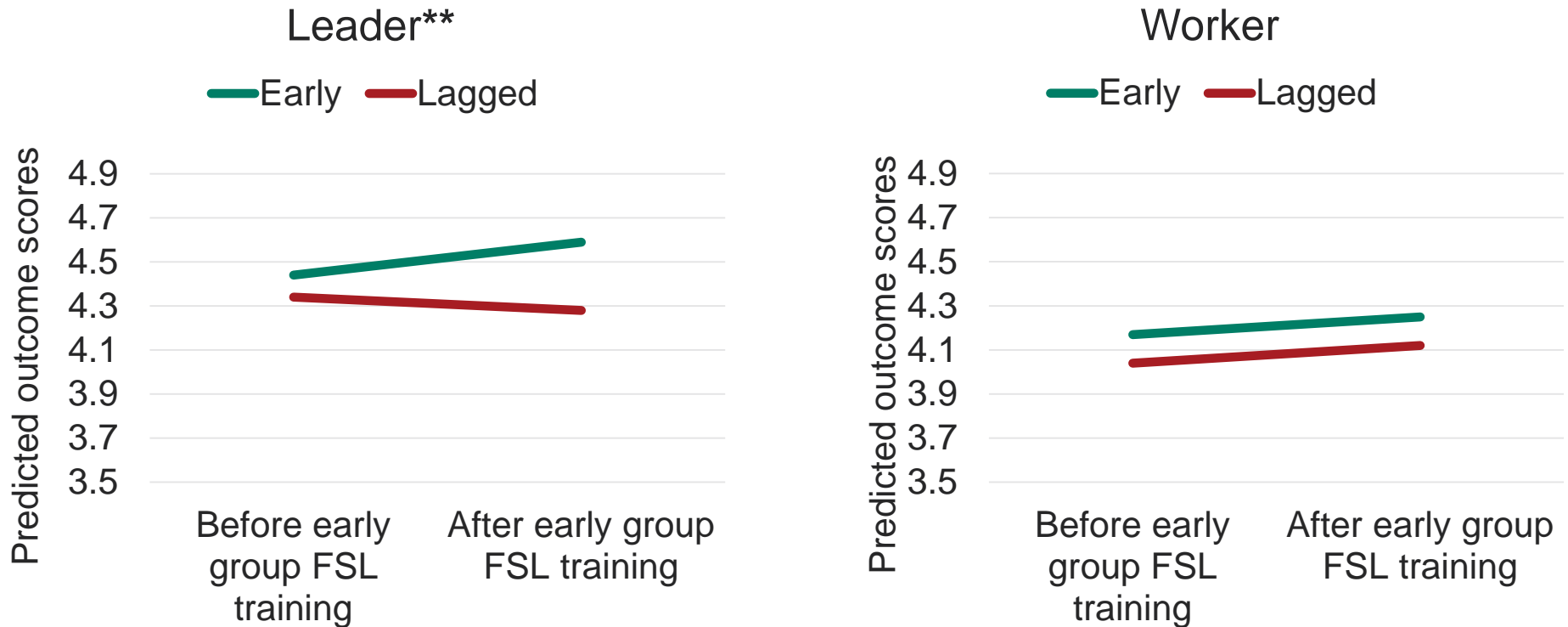
- Leaders: ~80%
- Workers: ~60%

- Primarily white males
- 38 – 45 years old
- Leaders primarily foremen
- Workers primarily experienced workers
 - With their leader an average of 3 months

Change in average leader-reported **understanding of safety leadership skills** before and after the FSL training by intervention group

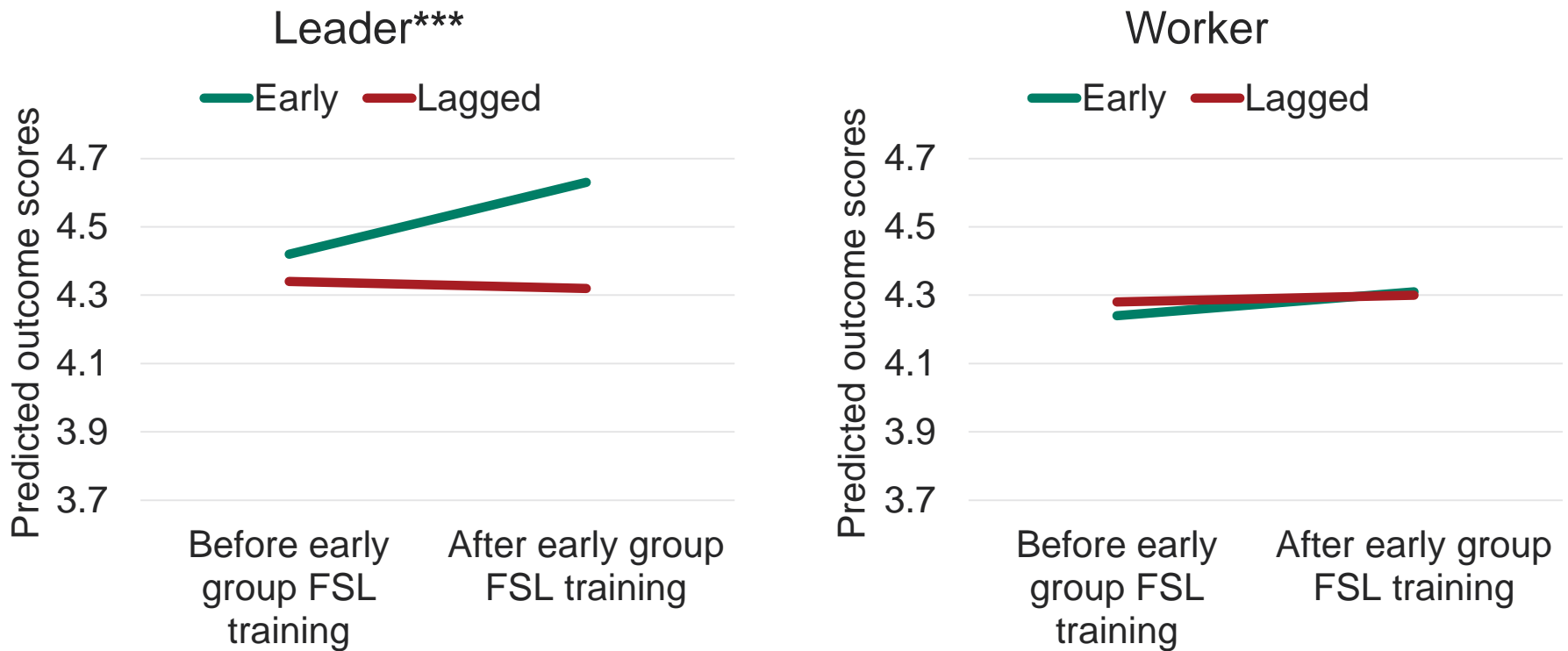


Change in average leader- & worker-reported **safety leadership behaviors of leader** before and after the FSL training by intervention group



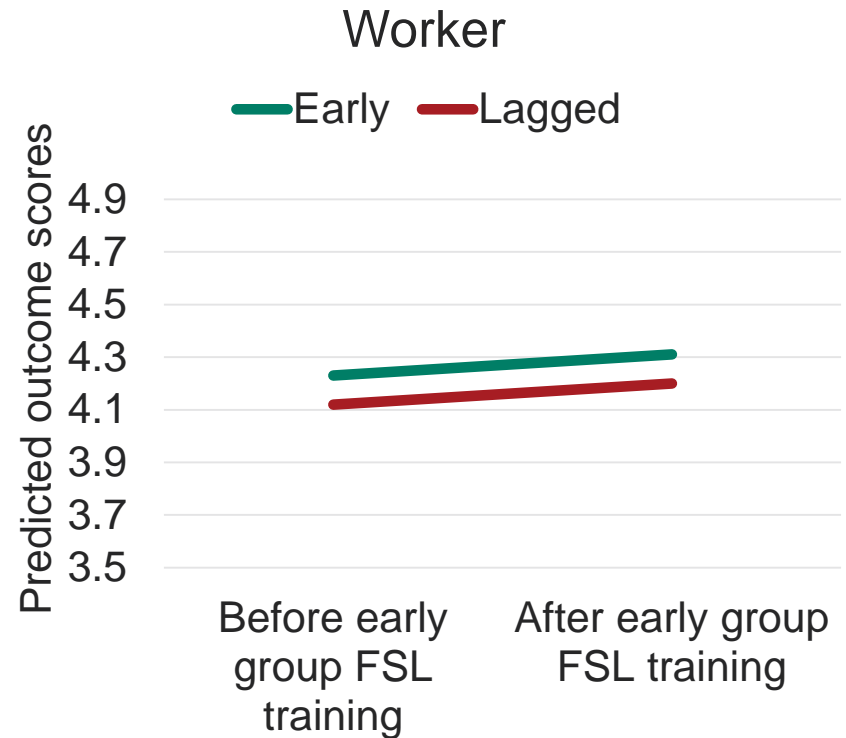
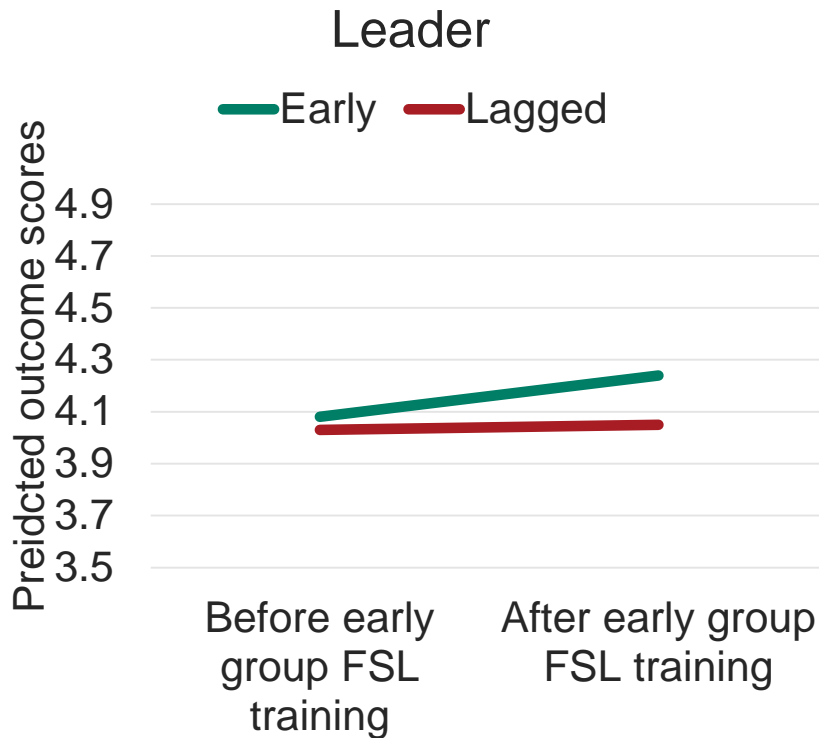
**p < 0.05

Change in average leader- & worker-reported **safety practices** before and after the FSL training by intervention group

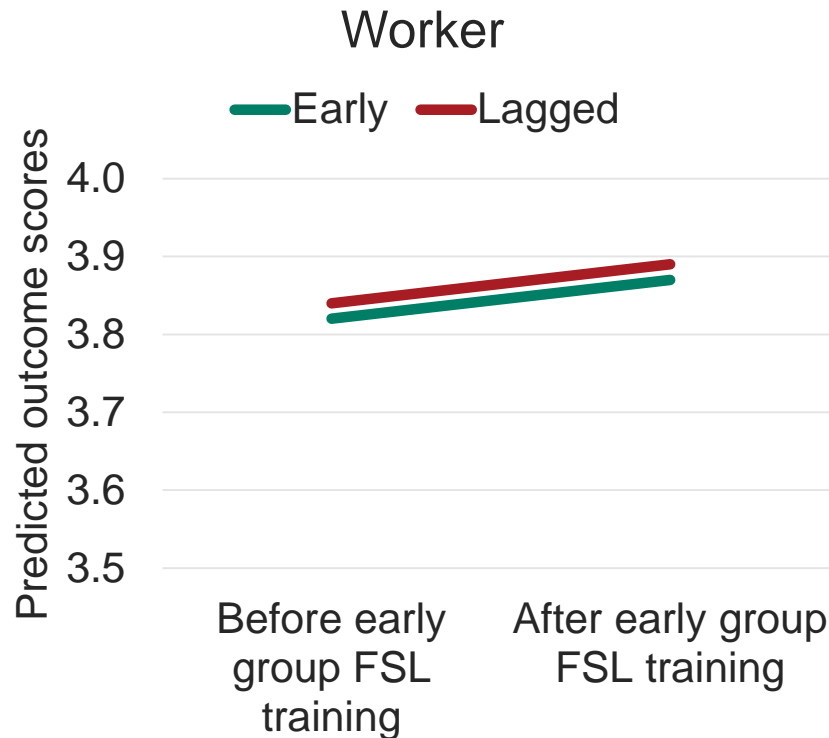


***p < 0.01

Change in average leader- & worker-reported **crew safety reporting** before and after the FSL training by intervention group



Change in average worker-reported **safety climate** before and after the FSL training by intervention group



Sustained impact

Change from 2- to 4-weeks after

Leader

- Safety leadership practices***
- Safety practices***
- Crew safety reporting***

Worker

- No change

***p < 0.01

Summary

- Leaders reported greater understanding and increased practice of safety leadership skills as well as safety practices at 2- & 4-weeks after the FSL training
 - No change amongst control group
- No change in worker-reported outcomes



Discussion

- Leader findings are consistent with previous safety leadership intervention studies
- Context behind FSL training design & future additional training components



In their own words...


- General reaction to training



- Inclusion of workers in the safety process



- On-going use of FSL training



BE A SAFETY LEADER

////////////////////

LEAD BY EXAMPLE: Make safety a core value by ‘walking the talk’ and reinforcing the idea that everyone owns safety.

ENGAGE TEAM MEMBERS: Engage, encourage, and empower team members to identify and act upon unsafe situations.


ACTIVELY LISTEN AND PRACTICE 3-WAY COMMUNICATION: Actively listen and practice three-way communication by having people repeat the message heard.

DEVELOP TEAM MEMBERS THROUGH TEACHING, COACHING, AND FEEDBACK: Act as a teacher and coach. Give FIST feedback (Facts, Impact, Suggestions, Timely).

RECOGNIZE TEAM MEMBERS FOR A JOB WELL DONE: Publicly and privately acknowledge team members when they consistently work safely and contribute to a positive safety climate

Additional resources

- New scenarios
- Handbook & self-assessment
- Create your own scenario
- Spanish materials
- Toolbox talks
- OSHA master trainer slides
- Evaluation surveys
- Multi-media: Videos & infographics



Lead by Example

John's Story

During the morning huddle in the trailer, the safety guy told us to use lifting equipment or get help from a co-worker when we lift and move the wood beams so we don't hurt our backs or shoulders, since they weigh more than 50 pounds. But when we got onto the jobsite and started working, our foreman didn't know where the lifting equipment was and said our number one priority was to get the job done by the end of the day because we had to be on another jobsite tomorrow.

- Have you ever been in a similar situation?
- How do you think this foreman's actions might affect jobsite safety? What about the morale of the crew?
- What could this foreman have done to lead by example?

Frontline safety leaders Lead by Example when they...

- Follow all safety procedures and policies.
- Ensure the equipment or additional labor needed to do a job safely is available and used.
- Always consider the safety implications of the decisions they make on the job site.
- Set clear safety expectations every day for their crew.

Leadership actions we will practice today and every day:

- **As your frontline supervisor/foreman and safety leader, I will:**
 - "Walk the talk" by always following safety procedures and safety policies.
 - Make decisions that demonstrate I value safety and believe it goes hand in hand with productivity and quality of work.
 - Make the contractor aware of any safety issues that come up that they need to take care of.
- **Crew members are also safety leaders and are expected to:**
 - Follow all safe work practices and procedures.
 - Immediately tell me if you see hazardous or unsafe conditions and provide suggestions on how to fix the issue.
 - Immediately report to me any near miss or injury experienced by you or a co-worker.
 - Participate in keeping the jobsite safe.
 - Reinforce the message that everyone owns safety.

Safety leaders have the *courage* to demonstrate they value safety by working and communicating with all team members to identify and limit hazardous situations even in the presence of other job pressures such as scheduling and costs.

©2017, CPWR - The Center for Construction Research and Training. All rights reserved. CPWR is the research and training arm of NABTQ. Production of this document was supported by cooperative agreement O1-00702 from the National Institute for Occupational Safety and Health (NIOSH). The contents and safety the responsibility of the authors and do not necessarily represent the official views of NIOSH.

CPWR THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

Foundations for Safety Leadership

Dissemination stats

- Downloads as of Aug 18'
 - FSL PowerPoint: 8,308
 - Instructor Guide: 3,452
 - TBTs: 2,767
- OSHA Ed Center FSL trainings as of Dec 17'
 - 601 FSL classes, reaching 6,611 students

The graphic features the FSL logo (Foundations for Safety Leadership) at the top. Below it, two overlapping circles represent 'FOREMEN & LEAD WORKERS' (light blue) and 'EFFECTIVE SAFETY LEADERSHIP' (yellow). A vertical line with a dot at the top connects the intersection of the circles to a dark blue box containing the text '5 CRITICAL LEADERSHIP SKILLS'. Below this box is a numbered list of five skills. At the bottom, a light blue box contains the text 'LEARN MORE ABOUT HOW YOUR FOREMEN AND LEAD WORKERS CAN BECOME EFFECTIVE SAFETY LEADERS AT' followed by the URL 'https://www.cpwr.com/foundations-safety-leadership-fsl'.

FSL Foundations for Safety Leadership

FOREMEN & LEAD WORKERS

EFFECTIVE SAFETY LEADERSHIP

5 CRITICAL LEADERSHIP SKILLS

- 1 **Lead** by example
- 2 **Engage** & empower team members
- 3 **Actively listen** & use 3-way communication
- 4 **Develop** team members
- 5 **Recognize** team members

LEARN MORE ABOUT HOW YOUR FOREMEN AND LEAD WORKERS CAN BECOME EFFECTIVE SAFETY LEADERS AT

<https://www.cpwr.com/foundations-safety-leadership-fsl>

Stay Connected



chwe.ucdenver.edu



[@CHWENews](https://www.facebook.com/CHWENews)



[@CHWENews](https://twitter.com/CHWENews)