TRANSLATION AND ADAPTATION OF A TOTAL WORKER HEALTH® INTERVENTION

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Overview

• Background of U.S. Forest Service Needs
• Existing Safety and Health Improvement Program (SHIP)
• Intervention Adaptation
• Design and Implementation
• Results & Conclusions
Themes from USFS Pilot Studies

- **Work-family Interface**
  - High levels of work-family stress—especially fire personnel

- **Supervisor support & work stress**
  - More supervisor support and communication needed—especially field workers (often lone workers)
  - More support needed from top management and the agency
  - Supervisors doing their best, but struggling with own workloads
Themes from USFS Pilot Studies

- **Health & safety**
  - Work overload—especially non-fire personnel
  - Productivity prioritized over safety—especially non-fire personnel
  - Concerns about conflict with the public and exposure to gunshots
  - Many workers experience some form of musculoskeletal pain or discomfort
Themes from USFS Pilot Studies

Organization-level constraints
- Conflicting job demands
- Rules and procedures
- Lack of information
- Role ambiguity
Safety and Health Improvement Program (SHIP)

**Components**

- One-hour computer-based supervisor training
- Two-week behavior tracking
- Facilitated team sessions
- Continued discussion
Safety and Health Improvement Program (SHIP)

**Intervention Targets**
- Stress and work-life conflict
- Health and safety practices
- Job performance and attitudes
- Team effectiveness
Safety and Health Improvement Program (SHIP)

Effectiveness

• Direct improvement of blood pressure ($d = .19$)

• Moderating effects of baseline leader-member exchange
• Lower LMX at baseline
  • Improved family supportive supervisor behaviors ($d = .43$)
  • Improved team effectiveness ($d = .70$)
  • Improved work-life effectiveness ($d = .57$)

(Hammer, Truxillo, Bodner, Rineer, Pytlovany, & Richman, 2015; Hammer, Truxillo, Bodner, Pytlovany, Richman, & Rineer, in prep)
Intervention Adaptation

- Safety and Health Improvement Program (SHIP)
- Adaptation for USFS Needs
- Supervisor Training and Team Education Program (STTEP)
Advantages of starting from SHIP:

**Content**
- SHIP designed to help supervisors be more effective in support they give
- SHIP explicitly focuses on improving safety, health, and work-family outcomes

**Design**
- Computer-based training fit with variety of USFS supervisor locations
Changes made to adapt to USFS context:

**Content**
- Added a role clarity support module
- Updated examples and pictures to be specific to USFS workers
- Consolidated some content to reduce amount of text

**Design**
- Removed team effectiveness component to increase scalability and fit time constraints
- Updated behavior tracking format to meet field and data collection needs
Design and Implementation

May 2017 – June 2017
- Emp Baseline Collection (Intervention + Control)
  Emp (N = 132)

June 2017 – July 2017
- Sup Baseline Collection (Intervention + Control)
  Sup (N = 77)
- Intervention Implementation
- Usual Practice (Control)
  Sup (N = 36)
- Intervention Implementation (Intervention)
  Sup (N = 41)

October 2017 – November 2017
- Follow-Up Collection (Control)
  Emp (N = 35)
  Sup (N = 21)
- Follow-Up Collection (Intervention)
  Emp (N = 37)
  Sup (N = 20)
Data Collection

Surveys
- Online first through USFS leadership distribution
- Attend forest-wide onboarding meetings to collect more participants in person
- Follow-up online

Intervention
- Supervisor survey (voluntary) before training
- Computer-based training online through cTRAIN
- Behavior-tracking exercise on paper within biweekly online check-in surveys
Analyses & Results

Intent-to-treat intervention analysis strategy in Mplus (version 7)

Employee intervention outcomes
• Lower psychological distress ($b = -.21$, $p < .05$)
• Less worry about forest safety encounters ($b = -.41$, $p < .05$)
• Fewer actual forest safety encounters ($b = -.20$, $p < .10$)
• Higher life satisfaction ($b = .19$, $p < .10$)
• Higher organization-level safety climate perceptions ($b = .22$, $p < .10$)
• Higher pain or discomfort reported in the neck or shoulders ($b = .18$, $p < .05$)
Conclusions

Advantages of adaptation:
+ Saves resources
+ Pre-existing evidence to suggest the intervention will benefit
+ Aids in dissemination of existing interventions
+ Allows for further testing of existing interventions

Disadvantages of adaptation:
- Content area may not fit
- Effects may be very different
- Implementation can change drastically across settings
- Is it still “evidence-based”? 
Thank you!