

Energy & Focus Test and Learn

FRM Subgroup



Fatigue is recognized as a growing concern

Fact: A 10% increase in overtime resulted in 2.4% decrease in productivity in 18 industries¹

OC DATA

- ~8% not getting enough sleep ²
- ~13% reported never feeling healthy and full of energy¹
- 48% self reported sleep issues ³
- 3% reported sleep apnea ³
- ~15% staff reported overtime 20 days per month ²

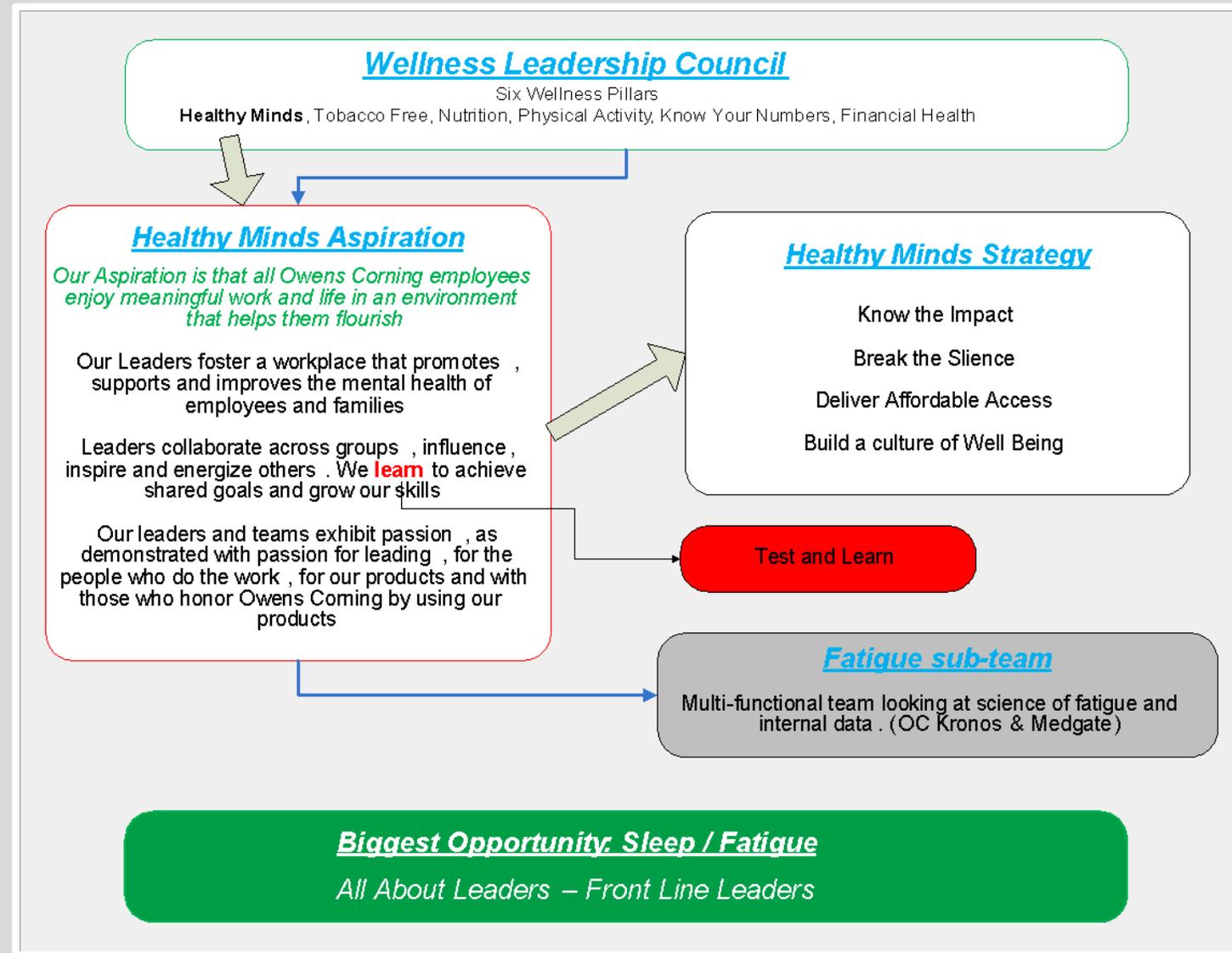


OTHER STUDIES

- Workers sleeping <6 hrs reported 2.4% higher productivity loss than those sleeping 7-9 hours (equals 2 employee work days per week per 100 employees) ⁴
- Employee output appears to fall sharply after 50 hours, and then drops even more dramatically after 55 hours. In addition, an employee working 70 hours produces nothing more than someone working 55 hours⁵
- 13% of workplace injuries can be attributed to sleep problems ⁶

Phase 1 of Energy and Focus Test and Learn Complete

- Targeted Interviews
- Focus Groups
- Data Collection
- Survey of 252 Salaried Employees
 - 154 Leaders across 22 plants
 - 98 respondents from Sales Team
- Prototype Training developed and reviewed by 21 Leaders

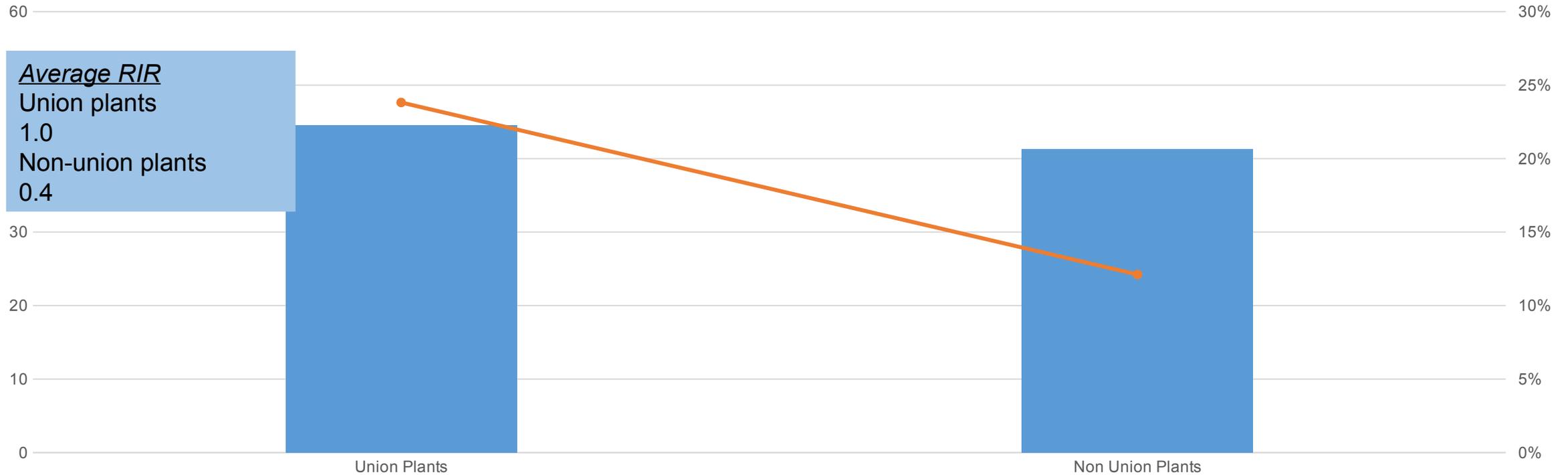


- 1 Emphasize team and **social** support.
- 2 Address staffing, scheduling and **environmental** issues.
- 3 Obtain **buy-in** using best case for fatigue management/education.
- 4 Curriculum content needs to convey dual **responsibility**.
- 5 Content needs to educate about **causes and effects** of fatigue.

Interviews & Focus Group Overall Recommendations

Data Review

Union vs. Non-union plants



Bargaining plants average higher % of employees working over 55 hours/wk and higher average RIR in 2017

R&A and INS

Rotating shifts
reflect higher
RIR and WC
costs

Composites did not have
straight shift plant in review

Based on data as of October 2017

24hr Operation	(All)	▼
Size	(All)	▼

Row Labels	Average of Worker Comp cost per # primary EE's	Average of Short Term Disability \$ per # primary EE's	Average of RIR
☐ Composites			
Rotating Shifts	139	36	1.05
Straight Shifts	-	14	-
Composites Total	108	31	0.81
☐ Insulation			
Rotating Shifts	206	38	0.41
Straight Shifts	144	28	0.39
Insulation Total	180	34	0.40
☐ R&A			
Rotating Shifts	164	20	1.96
Straight Shifts	128	24	0.59
R&A Total	142	22	1.11
Grand Total	152	30	0.72

Leadership Survey Results

Survey targeted salaried plant people leaders

Survey Executive Summary (1 of 2)

Plant leaders and managers completed a survey on perceptions of current overtime, sleep and fatigue issues, as well as potential for the “Energy and Focus” at Work training

- 86% of leaders perceive they are supported and have guidance on fatigue, AND ...
- Leaders show a bias: they can see that they experience fatigue- and energy-related issues, but see that occurring less so for their employees.
 - 27% of plant leadership in survey feel fatigue causes their own performance, safety, and/or sleep problems on a weekly basis and 54% on a monthly basis
 - 10% of plant leadership in survey feel fatigue causes their employees performance, safety, and/or sleep problems on a weekly basis and 27% on a monthly basis
- 64% agree OC should restrict amount of overtime allowed inside plant operations
- Plants with rotating shifts are more concerned about overtime and perceive more sleep-related issues than those with straight shifts.

Survey Executive Summary (2 of 2)

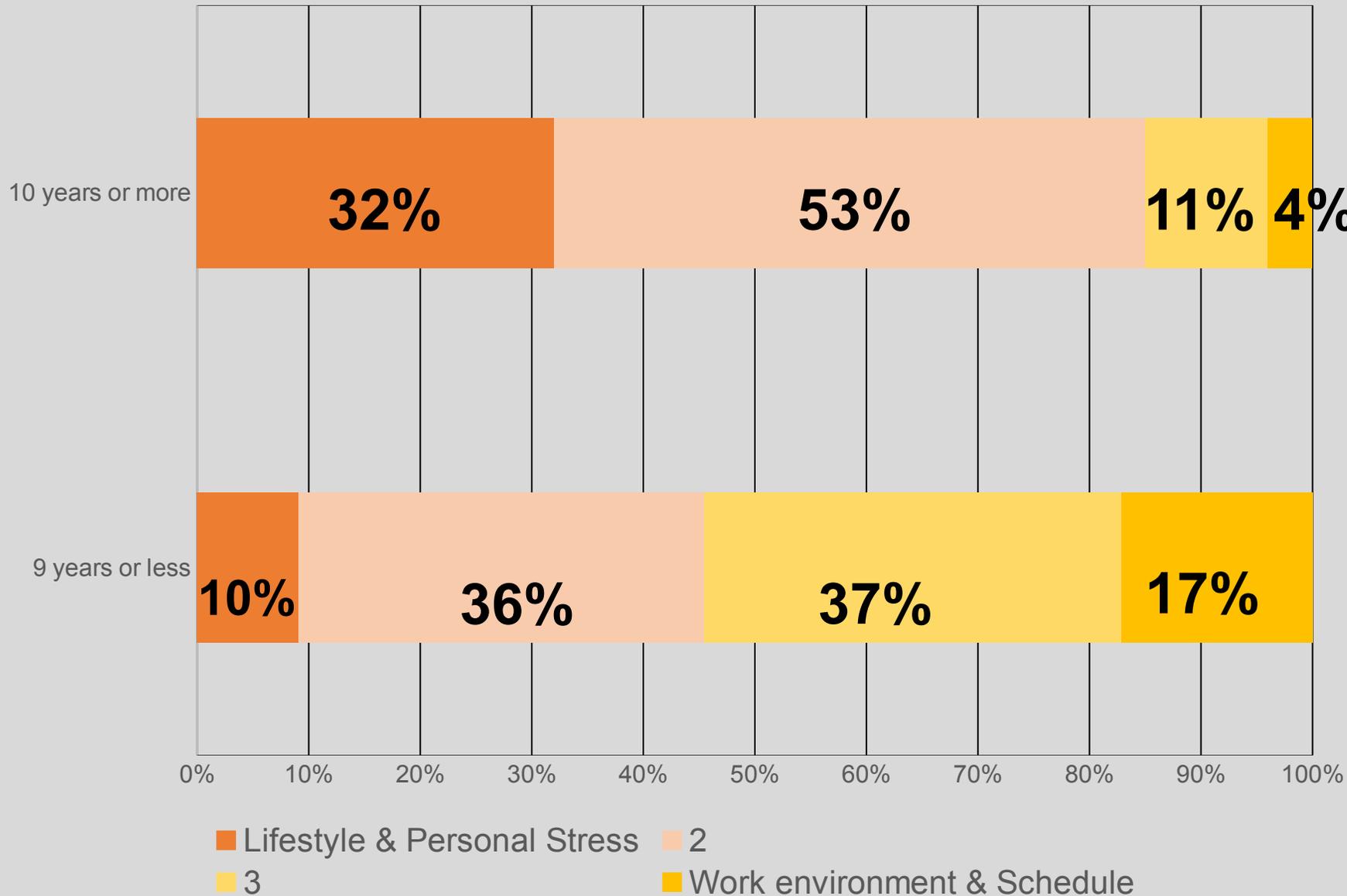
- Managers tend to attribute fatigue issues more to lifestyle than to work environment.
- The vast majority of leaders agreed that the training has potential to reduce fatigue risk and that they are willing to attend.
- Three particular training modules - *Observe & Educate*, *Recognize and Refer*, and *Connect to Safety* -- were highly predictive of training potential.
- Responses from union plants suggest they may be more reluctant about training.

Manager Perception of Fatigue-Related Safety Risk



Regarding fatigue-related safety risks, managers perceive themselves to be less at risk than they perceive their employees at risk. For example, at least monthly, 9% felt that their safety was at risk due to their own tiredness. In contrast, 21% felt that their employees were at risk due to tiredness.

Analysis of leaders 10 years or more of tenure vs. 9 years or less (excluding sales)



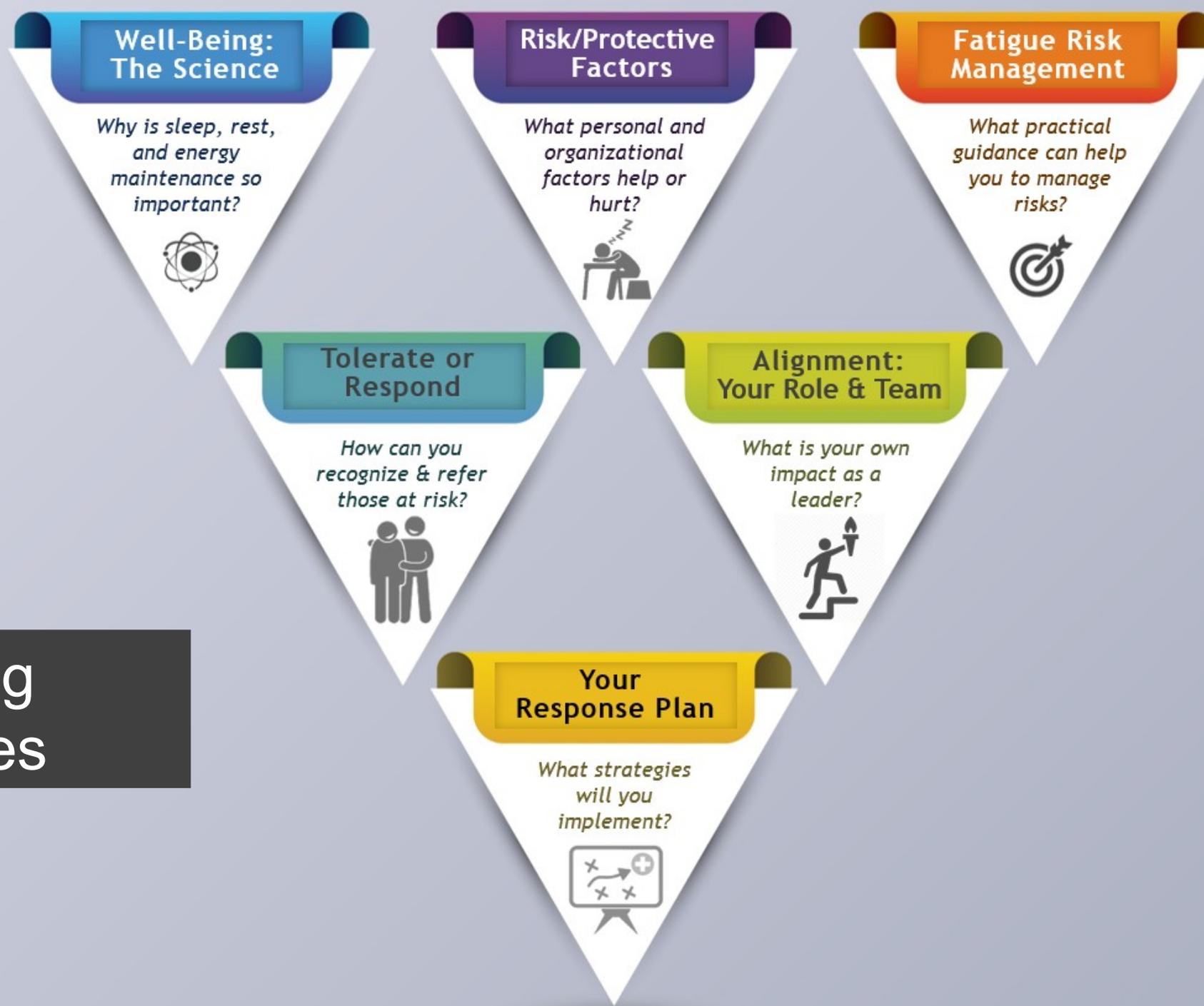
Compared to those with less tenure, managers with 10 years or more of tenure are more likely to attribute fatigue problems to lifestyle.

Difference is significant, $p < .001$

Prototype Training Review

Results of training review showed strong need for training
and the prototype was rated as highly feasible

Training Modules



Need by Relevance: Cross Tabulation

NEED FOR TRAINING

		NEED FOR TRAINING	
		LOW (Not at all or Somewhat Needed)	HIGH (Needed, Much Needed, Greatly Needed)
TRAINING RELEVANCE	LOW (Not Very, A Little, or Somewhat Relevant)	9.5% (2)	4.75% (1)
	HIGH (Very or Greatly Relevant)	0	85.75% (18)

The majority (85.75%) believe that a training like the one proposed here is BOTH something that is needed (Q1) and that purpose of the proposed training is relevant (Q3). These 2 items alone suggest that there is strong potential for the training and can help meet a fairly strong need amongst participating respondents.

Potential Effectiveness of Training

- Many (83%) would likely recommend the training to someone they knew as a good candidate (61% indicating *likely* or *very likely*)
- The majority (80%) rated potential effectiveness for leaders to address fatigue as *likely* or *somewhat likely*
- The majority rated the design as either fine **as is** or needing only **minor changes** (71%). Others indicating need for changes gave recommendations.
- The majority (78%) felt the program would likely meet safety and performance goals in their local plant (45% indicating *likely/very likely*)

Outcomes

1. Deeper understanding of drivers and protective factors of fatigue in the plants and impact on safety, productivity and employee health.
2. Model to address dual responsibilities of fatigue related issues.
3. Comprehensive curriculum that OC owns to replicate and sustain training modules, plus booster modules and new employee training module.
4. Refined C6 tool to incorporate core elements of fatigue risk management system.
5. Increased alignment with HR for improved policy guidance
6. Evaluation of training potential to impact drivers and fatigue outcome
7. Evaluation of participants own benefit from training.

Test and Learn Conditions

<i>plants will be assigned to one of four conditions</i>		Operational/Policy Change Implemented?	
		NO	YES
Received Training	NO	Control	GUIDANCE Operational/ Policy ONLY
	YES	LEADERSHIP Training ONLY	SYSTEMIC Both training and OPS/Policy

Questions?