



**WORKFORCE DEVELOPMENT
IN FOOD SAFETY**

presented by **Dr. Kevin R. Roberts**

1. Develop an employee-focused, performance-based food safety culture.
2. Present strategies for orienting and training employees in food safety.
3. Discuss methods for delegating responsibility, authority, and accountability.



PURPOSE

- Food safety training is often the first line of defense used in foodservice operations.
- Yet, approximately 97% of outbreaks traced to non-manufacturing food businesses involved food handler error or failure to comply with proper food safety practices. (Egan et al., 2007)



FOOD SAFETY TRAINING

Some studies have shown food safety education is effective at improving:

- Overall knowledge of food safety (Costello, et al., 1997; Finch & Daniel, 2005; Howes et al., 1996; Lynch et al., 2005; Roberts et al., 2008)
- Microbiological food quality (Cohen et al., 2001)
- Food safety inspection scores (Cotterchio et al., 1998; Kneller & Bierma, 1990)
- Self-reported practices (Clayton et al., 2002; McElroy & Cutter, 2004)
- Appreciation and awareness of proper practices on-the-job (Brannon et al., 2009)
- Attitudes (Wie & Strohhahn, 1997; Roberts et al., 2008)



FOOD SAFETY TRAINING

However, the link between knowledge and actual on-the-job behavior remains weak.



(Giampaoli et al., 2002; Green & Selman, 2005; Howells et al., 2008; Pilling et al., 2008; Roberts et al., 2008)

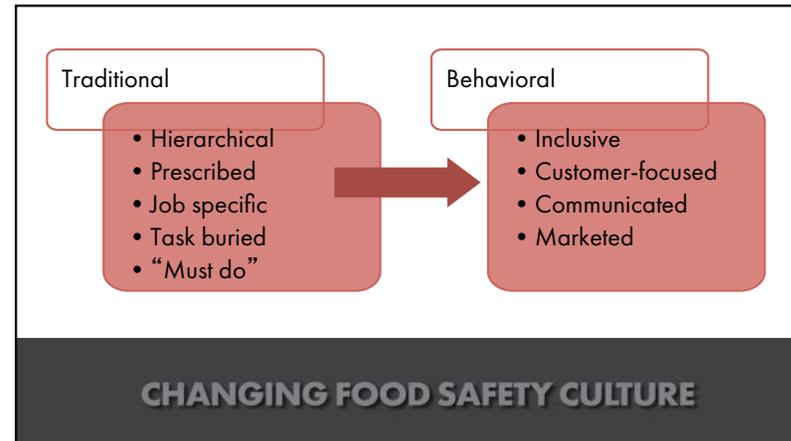
FOOD SAFETY TRAINING

Employee Behavior & Food Safety

What is the role of employees in food safety?

What can we do as managers to increase the likelihood that employees will follow what they have been taught?

FOOD SAFETY TRAINING



How would your employees respond?

Do you feel that proper handwashing is important?

≠

On-the-Job Behavior

Have you ever been trained on proper handwashing?

EMPLOYEE BEHAVIOR & FOOD SAFETY

- On-site observations
- 34 foodservice operations in seven states throughout the United States.



WHAT THE RESEARCH SHOWS US

- 31 managers trained on personal hygiene and proper cleaning and sanitizing.
- 29 of the operations documented a Standard Operating Procedure for handwashing.
- Nearly all (36) hand washing facilities were conveniently located and accessible for employees.
- However...



WHAT THE RESEARCH SHOWS US
HANDWASHING

Observed Activity	Total Observations	Number (%)		
		Employee observed washing hands properly and when required	Employee observed washing hands improperly	Employee observed failing to wash hands when required
Immediately before engaging in food prep	137	51 (37.2)	30 (21.9)	56 (40.9)
Before donning new gloves or changing gloves	144	39 (27.1)	31 (21.5)	74 (51.4)
After soiling hands during food preparation or service activities	104	18 (17.3)	20 (19.2)	66 (63.5)
After handling soiled equipment, dishes or utensils	97	7 (7.2)	17 (17.5)	73 (75.3)
After touching body parts, coughing/sneezing; blowing nose; eating or drinking	79	3 (3.8)	12 (15.2)	64 (81.0)
Switching between handling raw animal foods and ready-to-eat foods	6	4 (66.7)	1 (16.7)	1 (16.7)
Other	8	0 (0)	0 (0)	8 (100.0)
Total Observations	575	122 (21.2)	111 (19.3)	342 (59.4)

WHAT THE RESEARCH SHOWS US
HANDWASHING

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After handling soiled equipment, dishes or utensils	97	7 (7.2)	17 (17.5)	73 (75.3)

WHAT THE RESEARCH SHOWS US HANDWASHING

- 31 managers indicated that they had training on personal hygiene and proper cleaning and sanitizing.
- 29 managers indicated that they offered training sessions for employees on the proper use of chemicals.
- However...



WHAT THE RESEARCH SHOWS US SANITATION

Employee Food Handling Practices			
Observed Activity	Number (%)		
	Total Observations	In Compliance	Out of Compliance
Employees do not contact ready-to-eat foods with bare hands	135	124 (91.9)	11 (8.2)
Food contact surfaces and utensils are clean to sight and touch and sanitized before use	110	86 (78.2)	24 (21.8)
Check internal temperature of food by inserting the thermometer stem or probe into the thickest part of the product	80	64 (80.0)	16 (20.0)
Sanitizing solutions are changed as needed	69	32 (46.4)	37 (53.6)
Separate wiping cloths are used for food and nonfood surfaces	68	29 (42.7)	39 (57.4)
Wash, rinse, sanitize, and air-dry thermometers before and after use	62	35 (56.5)	27 (43.6)
Check temperature of food at the completion of cooking	47	29 (61.7)	18 (38.3)
Dishes/Utensils washed & sanitized using proper manual procedure	43	25 (58.1)	18 (41.9)
Check temperature of food at the completion of reheating	36	31 (86.1)	5 (13.9)

WHAT THE RESEARCH SHOWS US SANITATION

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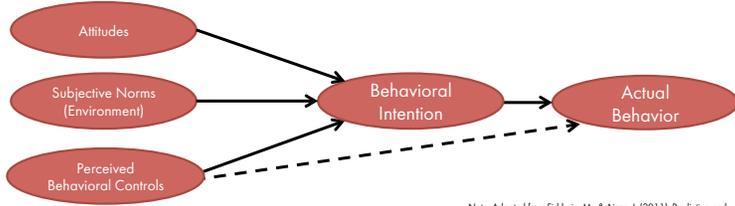
WHAT THE RESEARCH SHOWS US SANITATION

- Effective food safety practices do exist.
- Employees are informed.
- Reducing food safety risk is still key through:
 - Strong leadership
 - Employee behaviors



SUMMARY OF FINDINGS

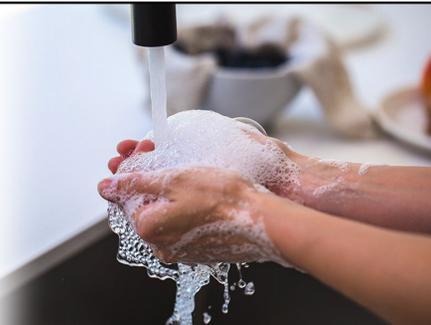
Theory of Planned Behavior



Note. Adapted from Fishbein, M., & Ajzen, I. (2011). Predicting and changing behavior: The reasoned action approach. Taylor & Francis.

STRATEGIES FOR CHANGING BEHAVIORS

- Lin (2108) conducted a meta-analysis of Theory of Planned Behavior studies to determine how useful the theory was in predicting food safety behavioral intention.
 - Explored research from 1982 through March of 2018.
 - Identified 14 studies that met the inclusion criteria.



WHAT THE RESEARCH SHOWS US

- The overall random effect size was significant, showing the TPB constructs predict food safety behavioral intention.
- Subjective norms were noted as the most influential variable to food safety behavioral intention.



WHAT THE RESEARCH SHOWS US

- However, the Theory of Planned Behavior model only explained a combined 22% of total true effect variance.
- Thus, a considerable amount of the variance (78%) within food safety behavioral intention is still unexplained.



WHAT THE RESEARCH SHOWS US

- Using the results of this study, Lin took it a step further and conducted qualitative surveys with food handlers.
- A total of 104 responses from foodservice and restaurant employees were documented for coding.



WHAT THE RESEARCH SHOWS US

- Theme 1. Moral Recognition - Doing What is Right
- Theme 2. Descriptive Norms – What others do impacts our behavior
- Theme 3. Others’ behavior turns to the group’s culture and identity
- Theme 4. Leadership

WHAT THE RESEARCH SHOWS US

Theme 1. Moral Recognition - Doing What is Right

- Not influenced by behavioral beliefs, but more innate motivation

“None of my fellow employees’ beliefs will get in the way of what I am doing. I am the one driving the bus. Customer safety [ensures] everyone that comes through the door has faith in us and our abilities. Lastly, it’s just the right thing to do [Male, 39].”



WHAT THE RESEARCH SHOWS US

Theme 2. Descriptive Norms – What others do impacts our behavior

- Most employees claim to be unaffected by normative beliefs, however others' behavior tends to have a substantial influence.

"If you work in food and your managers aren't following the procedures then you can guarantee that none of the employees are. You have to set the example and make a high standard for others to follow [Female, 27]."



WHAT THE RESEARCH SHOWS US

Theme 3. Others' behavior turns to the group's culture and identity

- The observation of others' behavior does encourage proper behavior and fine tunes the group's culture and identity.

"We can only be effective as a team if everyone follows these practices. My own efforts will not be good enough to protect customers if someone else does not do the same and someone might get sick [Female, 42]."



WHAT THE RESEARCH SHOWS US

Theme 4. Leadership

- The leader not only leads the individuals to act, but also encourages others to act corresponding to the norm and culture.

"It is important because we are role models to all the employees that are there. If the employees see the management and/or owners doing their worst then the employees learn from their actions [Female, 39]."

"They [managers] set an example. If they don't care, no one else will either. Team member will always do slightly less than the manager [Female, 32]."



WHAT THE RESEARCH SHOWS US

Food safety training improves knowledge

- Training alone does not improve most behaviors.

Workplace infrastructure

- Clear communication of expectations and consequences when not followed.

Simple interventions

- Persuasive signs and contests can help to improve behavior.

WORKFORCE DEVELOPMENT STRATEGIES

PERSUASIVE SIGNS

Illustrate why following proper practices are important.

Traditional food safety training often leaves out the all important "why"!

WORKFORCE DEVELOPMENT STRATEGIES

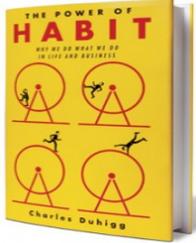
Sauer, K. & Kwon, J. (October 2014). Caroline's Story. Food allergy dramatic re-enactment for USDA Higher Education Challenge Grant.

WHY FOOD SAFETY IS IMPORTANT

Focus on what employees can do – not what only you as managers control.

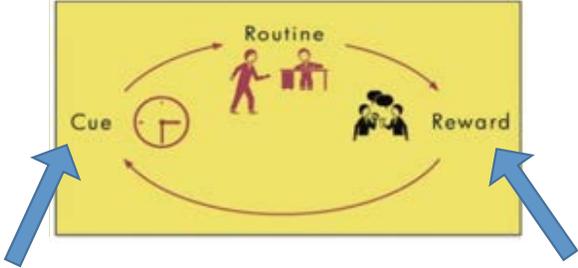
Consider the habits your employees come to you with.

WORKFORCE DEVELOPMENT STRATEGIES



Duhigg, C. (2012). The Power of Habit: Why we do what we do in life and business. Random House: New York. <https://charlesduhigg.com/>

CREATING A POSITIVE HABIT



CREATING A POSITIVE HABIT



CREATING A POSITIVE HABIT - EXAMPLE



CREATING A POSITIVE HABIT - EXAMPLE

\$6 off any 2 packs Enfamil[®] baby nutrition. Expires 12/31/17. Includes barcode and Target logo.

\$4 off any one (1) Playtex[®] Diaper Genie[®] Multipack Pack. Expires 12/31/17. Includes barcode and Target logo.

CREATING A POSITIVE HABIT - EXAMPLE

Keystone habits encourage change in the organization:

- Produce small wins.
- Encourage change by creating structures that help others thrive.
- Help create a culture that embodies new values.

KEystone HABITS

“Champions don’t do extraordinary things. They do ordinary things, but they do them without thinking, too fast for the other team to react. They just follow the habits they’ve learned.”
-Tony Dungy

CREATING A POSITIVE HABIT - EXAMPLE

- It is the WHY in human behavior.
- The reward is the reason habits exist.
- Motivation comes from within.

REWARD & MOTIVATION

Customize your food safety programs and training.

- Generational
- Gender
- Literacy



WORKFORCE DEVELOPMENT STRATEGIES

- Work to improve attitudes.
- Make sure to pay attention to the norms in your operation.
- Make sure you remove all barriers, perceived or otherwise.



DELEGATING RESPONSIBILITY, AUTHORITY, & ACCOUNTABILITY

- Help employees create positive habits.
- Focus on behaviors employees can control.
- Figure out what is important to your employees.



DELEGATING RESPONSIBILITY, AUTHORITY, & ACCOUNTABILITY



Questions?

Dr. Kevin R. Roberts

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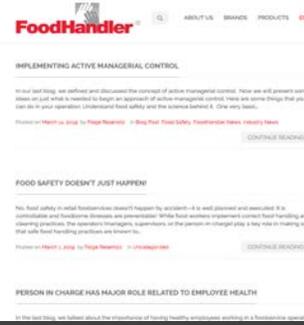
FOODHANDLER RESOURCES

Past Blogs

- Norovirus
- Employee Health & Reportable Illness
- Active Managerial Control* & Why (tie with 1st Webinar)

Upcoming Blogs

- Coaching & Training Staff
- Productivity (tie with 2nd webinar & Coaching & Training Staff blogs)
- Food Storage & Food Contact (tie with 3rd Webinar)



FOODHANDLER RESOURCES

Please send us your questions and comments at:
foodsafety@foodhandler.com



**HOW DID WE DO?
FEEDBACK & COMMENTS**