Distracted Driving Among Commercial Drivers

Nicholas Ward & Jay Otto Center for Health and Safety Culture TRANSPORTATION MATTERS SUMMIT, 2019

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Center for Health & Safety Culture

www.CHSCulture.org

Breakout

Growing an Effective Safety Culture



About the Center for Health and Safety Culture

We are an interdisciplinary center serving communities and organizations through research, training, and guidance to cultivate healthy and safe cultures.

Purpose





Changing behavior is not rocket science. It is much more difficult!

Western Transportation

Institute

MONTANA

[K. FOSS, UNC]

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Influence

Biology

Psychology

Physical Environment Social Environment











Acceptance





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Rejection





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Can you change behavior?





Sounds like ...





Example





Culture?



Beliefs

Definition

Culture?



Behavior

Culture?



Artifacts



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Goal

Useful

Useless





Definition

"The **system of beliefs** shared among groups of users and stakeholders that influence their decisions to behave or act in ways that affect safety (risk of injury)."

[Source: adapted from NCHRP 17-69]







Values: As Values: As

Assumptions:

Beliefs:



Attitudes:

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Norms:



Control (PBC):









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Naturalistic Study

	Crash	Prevalence in
Behavior	Odds Ratio	Crashes
Reaching for object (non-cell phone)	9.1	1%
Extended glance duration to external object	7.1	1%
Cell text (handheld)	6.1	2%
Total cell (handheld)	3.6	6%
Total in-vehicle device	2.5	4%
Cell talk (handheld)	2.2	3%
Interaction with adult/teen passenger	1.4	15%

Dingus, T. A., Guo, F., Lee, S., Antin, J. F., Perez, M., Buchanan-King, M., & Hankey, J. (2016). Driver crash risk factors and prevalence evaluation using naturalistic driving data. *Proceedings of the National Academy of Sciences*, *113*(10), 2636–2641.



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Pilot Survey

Qualtrics Purchased Panel of Respondents

- 268 respondents from a national sample (41 states)
- 50% female, ages 18 to 64
- 39% urban, 47% suburban, 15% rural
- 100% drove for work and 100% had an active cell phone
- 27% had been in a crash in the past year (not their fault)
- 17% had been in a crash in the past year (was perhaps their fault)



Distracted Driving Behaviors

"Thinking back over the past 30 days, while driving FOR WORK, have you done the following WHILE THE VEHICLE WAS MOVING?"

- 49% had a conversation on a cell phone while holding it in your hand
- 62% had a conversation on a cell phone without holding it ("hands free")
- 50% typed or read on a cell phone
- 61% adjusted a navigation system
- 85% adjusted the radio, sound system, or vehicle device
- 76% reached for an object in the vehicle
- 69% engaged in a conversation with a passenger in the vehicle



Crash Involvement

- Distracted behaviors were correlated with crashes (0.36, p<0.01)
- Individuals who reported engaging in distracting behaviors about half the time or more often were 3.2* times more likely to be in a crash

*95% confidence intervals: 1.99 to 5.12



Attitude (Dangerous vs. Safe)

"Imagine you are a PASSENGER in a WORK vehicle and the VEHICLE IS MOVING. How would you feel about the DRIVER engaging in each of the following actions?"

Dangerous

- 79% typing or reading on a cell phone
- 66% having a conversation on a cell phone while holding it in your hand
- 54% adjusting a navigation system
- 54% reaching for an object in the vehicle
- 37% having a conversation on a cell phone without holding it ("hands free")
- 32% adjusting the radio, sound system, or vehicle device
- 21% engaging in a conversation with a passenger in the vehicle

Attitudes (dangerous/safe) correlated with willingness (0.60, p<0.01) and behavior (0.59, p<0.01).



Perceived Norms (expectations)

Respondents who believed their supervisor thought it was OK to engage in distracting behaviors were **6* times more likely** to regularly do so compared to those who believed supervisor thought it was NOT OK.

Supervisor expectations matter!

*95% Confidence interval: 3.4 to 10.6



Perceived Control

Respondents who had a high sense of "pressure" to engage in distracting behaviors were **5* times more likely** to regularly do so compared to those who had a lower sense of pressure.

Sense of "pressure to engage" matters!

*95% Confidence interval: 2.8 to 9.4



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Beliefs Matter!

- Attitudes (safe vs. dangerous)
- Perceived Norms (supervisor expectations)
- Perceived Control (sense of pressure)

These beliefs can be changed!



Strategies

- Organization values (mission)
- Leadership voice.
- Shared voice.
- Onboarding.
- Role of Workplace Rules.
- Intervening (Proactive Traffic Safety).
- Review and reward system.



Other Exciting CHSC Research

• Increasing Seat Belt Use in Rural Communities

portation

- The Role of Psychological Reactance and Moral Disengagement in Seat Belt Use and Aggressive Driving
- Beliefs Behind Driving Under the Influence of Cannabis
- The Role of Parents in Teaching Safe Driving Behaviors

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• Growing Safety Culture within DOTs



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