

THE POWER OF PEER INFLUENCE

A Key Determinant of Safe Behavior

By E. Scott Geller

THE FREEDOM TO CHOOSE is invaluable for human well-being and life satisfaction. But we often take this crucial human dynamic for granted without realizing the dramatic influence, or power, of perceived choice. Consider, for example, the extent to which the pleasure of a weekend break from a weekly work routine is determined by the opportunity to choose what to do each day and when to do it, from choosing when to awake in the morning to deciding your daily activities, some of which might require more energy and effort than what is required to accomplish typical work assignments. In other words, an individual's greater enjoyment performing one task over another is often due to the perception of having more personal choice for that task.

Given that human welfare or subjective well-being is enhanced by the perception of personal choice, people must know how to increase perceptions of choice within themselves and among others—from young children and teenagers to family, friends and work colleagues. This article explains how to make that happen for OSH. While personal experience and common sense teach us the positive impact of perceived choice, psychological science has demonstrated the power of perceived choice in OSH-related situations, as explicated in this article.

The power of perceived choice might not be appreciated while it is experienced, but personal choice is surely recognized when it is threatened, as observed frequently when face masks were mandated during the COVID-19 pandemic. Some perceived the face mask requirement as a threat to their personal freedom, and they actively resisted requests to comply with the mandate (e.g., on an airplane). Social psychologists refer to such attempts to maintain personal choice as “psychological reactance”

(Brehm, 1966), and behavioral scientists call such contrary behavior “countercontrol” (Skinner, 1971).

Regardless of the label for behavioral resistance to a mandate, reacting to maintain personal choice can be extremely counterproductive for OSH. For instance, the author once met an employee who wore safety frames—not safety glasses, only safety frames—because he had removed the lenses. Whenever that employee's supervisor passed by, this employee would look at him and wave. The individual's coworkers actually applauded him for his noncompliance. At that facility, most employees perceived safety as a top-down mandate that restricted individual freedom or perceived choice. In fact, that particular employee increased his social status among his work colleagues by demonstrating countercontrol or psychological reactance.

Self-Directed Behavior

At times, people need an external accountability system to keep them motivated. Psychologists call these “extrinsic motivators,” such as when managers use paychecks and teachers use grades to keep employees or students on track. Sometimes, people develop self-motivation or self-accountability within the context of an external accountability system. In other words, it is possible to establish conditions that facilitate self-motivation and self-directed behavior. In fact, the perception of choice or autonomy is a primary determinant of self-motivation and self-directed behavior (Deci & Flaste, 1995).

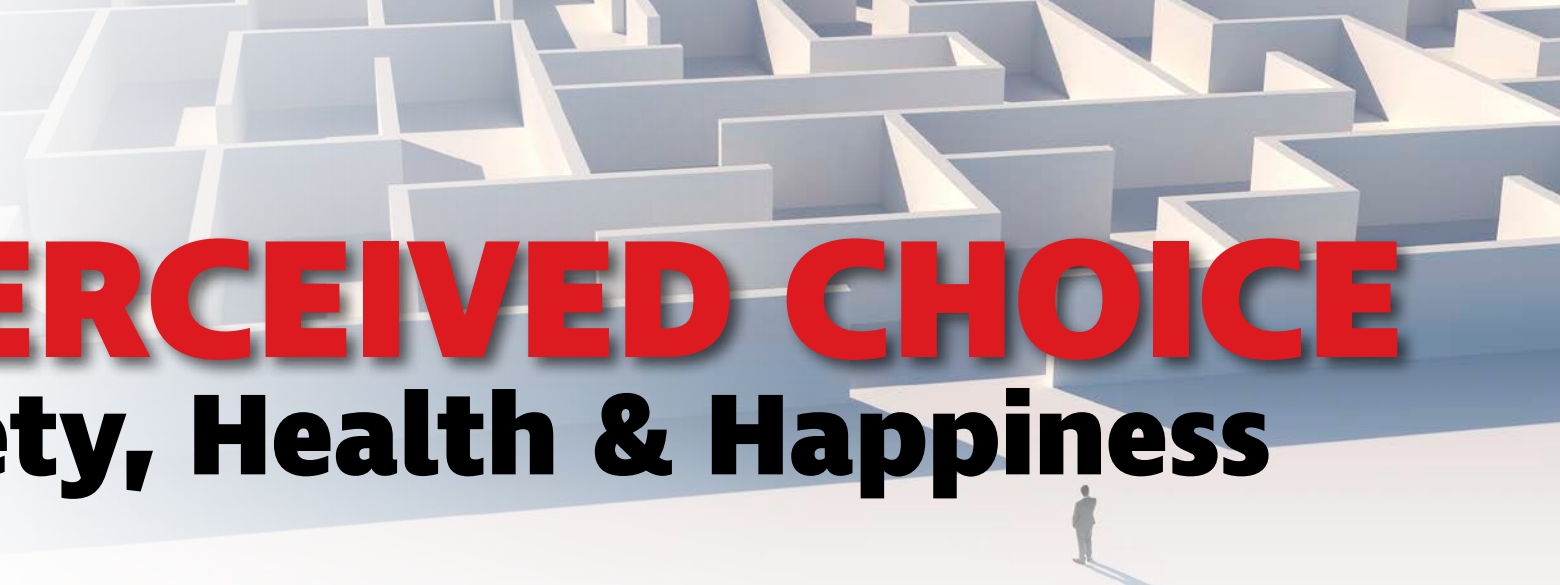
Imagine a mother helping a young boy dress in the nice clothes that she selected for him to wear on his first day of school. This could feel like top-down control to the child, and he might resist in order to assert his personal freedom or perceived choice. Now consider an alternative approach: The mother selects two school outfits she finds equally appropriate for her son to wear and lets him choose between them. In this case, the young boy will be less resistant because he perceives some choice in the clothes he will wear to school.

Switching to a workplace scenario, consider two approaches to soliciting problem-solving assistance from a work team. A common approach is for the supervisor to define both the problem and the solution, then assign certain employees relevant problem-solving tasks. Alternatively, the supervisor might solicit volunteers to perform the various problem-solving tasks, thereby integrating some perceived choice into the situation.

A more effective approach would be to describe the problem to the work team, but ask the workers for their

KEY TAKEAWAYS

- Perceived choice enhances self-motivation and self-directed behavior. It is key to effective participative management. Perceived choice is a unique quality of behavior-based safety.
- Perceived choice decreases risk compensation and increases response generalization. It is critical for motivating safe behavior with cognitive dissonance.
- Human welfare or subjective well-being is enhanced by the perception of personal choice, so people need to know how to increase perceptions of choice within themselves and among others. This article explains how to make this happen for OSH.
- The article also explores whether an OSH intervention can activate cognitive dissonance, and thereby increase a person's self-accountability for injury prevention. The critical relevance of perceived choice is also discussed.



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solution possibilities, including the various problem-solving tasks required. Obviously, this approach will require much more interpersonal dialogue, and therefore it will take more time and be substantially less efficient than the first approach. However, the work team might derive a more effective solution. But, even if the problem-solving tasks derived by the employees are the same as those proposed by the supervisor using the first approach, the perceived choice and self-motivation inspired by the second approach that solicits worker input would be well worth the extra time and effort.

Participative Management

Readers may be familiar with the term “participative management,” which essentially means that employees are provided with some personal choice during the planning, execution or evaluation of their jobs. The result can be more self-motivation, engagement and life satisfaction among the workforce. As noted, participative management takes more time and is therefore less efficient than a management-directed approach, but the gain in effectiveness is typically well worth the loss of efficiency.

A Personal Example

More than 45 years ago, the author explored participative management and perceived choice within a university course. I was teaching two sections of social psychology, both on Mondays, Wednesdays and Fridays—one at 8 a.m. and the other at 11 a.m. There were about 75 students in each class. On the first day of the 8 a.m. class, I did not distribute a typical prepared syllabus with weekly reading assignments. Instead, I distributed only a general outline of the course that introduced the textbook, course objectives and basic criteria for assigning final grades, which included a quiz on each textbook chapter and a comprehensive final exam on class lectures, discussions and demonstrations (Geller, 2013).

Through an open discussion and voting process, the 8 a.m. class was given an opportunity to choose the order in which the 10 textbook chapters would be assigned for reading, classroom discussions and quizzes. The students could submit multiple-choice questions for potential use on the 10 chapter quizzes, and hand in short-answer and discussion questions for possible inclusion on the final exam. The 11 a.m. class received the order of textbook chapters selected by the 8 a.m. class, but was not given an opportunity to submit quiz or exam questions.

This resulted in a choice and an assigned classroom condition. Two undergraduate research students attended

each of these classes, posing as regular students. They systematically recorded the frequency of student behaviors that reflected class participation. These observers did not know about the choice versus assigned manipulation.

From the day the students in the 8 a.m. class voted on the textbook assignments, this class seemed more engaged than the 11 a.m. class. This perception was verified by the observers’ participation records. Although several students from the 8 a.m. class submitted potential quiz and final-exam questions, none of those questions were used exactly as written. Each class received the same quizzes and final exam. The 10 quiz grades, final exam scores and teaching-evaluation scores from the standard university forms distributed on the last class day were significantly higher in the choice class than in the assigned class.

Several factors could have influenced the dramatic group differences, but the choice versus assigned manipulation was likely a critical factor. The initial opportunity to choose the order of class reading assignments increased students’ motivation and class participation from the start, and that extra motivation and engagement led to more involvement, perceived choice, self-motivation and personal learning. The students’ attitude toward the early-morning class improved as a result of experiencing more perceived choice, personal control and engagement.

It is likely that the choice condition was especially powerful because the choice opportunities for the 8 a.m. class were dramatically different from the traditional top-down classroom atmosphere at the time, exemplified by the organization of the 11 a.m. class. In other words, the contrast of the choice class with the students’ other university classes likely made the choice opportunities in the 8 a.m. class especially salient, meaningful and motivating.

Behavior-Based Safety

Most readers are familiar with the concept of behavior-based safety (BBS), which the author and his graduate students introduced in 1979 at several Ford Motor Co. facilities (Geller et al., 1987). This innovative approach to OSH became immediately popular, and was disseminated nationwide and then worldwide by several consulting firms. This popularity and success were undoubtedly due to BBS’s participative management qualities, which notably differed from the traditional rule-governing approach to OSH.

Rather than merely following the safety regulations declared by a company’s safety director and OSHA, employees practicing BBS develop their own checklists of safe and at-risk behaviors at their particular work setting. Then, they select times to use this critical behavior

checklist to observe the work behaviors of their coworkers after receiving their permission (e.g., Geller, 1996, 2001, 2005; Geller & Williams, 2001).

Risk Compensation

Safety professionals and leaders should be aware of a research-supported phenomenon called risk compensation (Peltzman, 1975) or risk homeostasis (Wilde, 1982). Specifically, those terms refer to the evidence-based phenomenon that interventions designed to prevent or reduce unintentional injuries (e.g., PPE, machine guards, vehicle seat belts) decrease a person's perception of risk, and thereby increase occurrences of at-risk behavior. For example, when Janssen (1994) requested habitual nonusers of vehicle seat belts to buckle up, the participants drove faster, followed more closely behind vehicles in front of them, changed lanes at higher speeds, and braked later when approaching an obstacle.

More recently, Hasanzadeh et al. (2020a, 2020b) immersed participants in a mixed-virtual-reality scenario that simulated a roofing task. The researchers monitored workers' behaviors and physiological responses under three levels of safety-related intervention, and they found significant risk compensation. For example, when using fall protection, the participants spent more time exposing themselves to the risk of falling by working closer to and leaning over the edge of the 20-ft-high virtual roof.

Research is needed to determine whether educating people about this risk-compensation phenomenon can reduce its detriment to OSH. However, behavioral science research has demonstrated that perceived choice can stifle risk compensation and influence a positive contrasting effect: response generalization. More specifically, Ludwig and Geller (1997) evaluated the impact of a participative management approach to increasing a particular safe-driving behavior among pizza-delivery drivers. The targeted safe behavior was delivery drivers stopping their vehicle completely before exiting the store's parking lot to deliver a pizza in 30 minutes or less.

Researchers unobtrusively observed three driving behaviors of the delivery drivers when they were leaving popular pizza shops in two towns, Blacksburg and Christiansburg, VA. At the Blacksburg shop, a goal of "75% complete stopping" was derived from an interactive group discussion among the store manager, two researchers and 26 delivery drivers. In contrast, at the Christiansburg shop, a complete-stopping goal of 75% was assigned by the store manager after he delivered a passionate presentation about the need for safer driving practices to the 24 delivery drivers and two researchers in attendance.

The systematic behavioral observations evidenced a significant benefit of the participative management approach. The delivery drivers at both stores increased the percentage of times they stopped completely at the target intersection equivalently, and they met the 75% complete-stopping goal. However, the delivery drivers who participated in determining that goal evidenced a significant increase in the occurrence of two other safe-driving behaviors that had not been mentioned during the group meetings: the use of turn signals and seat belts. Thus, applying the perceived choice of participative management to set the complete-stopping goal influenced response generalization, which is the opposite of risk compensation.

More recently, the author and his students (Oliver et al., 2021) observed an analogous response-generalization effect among students and faculty on the Virginia Tech campus. Specifically, during the COVID-19 pandemic, those individuals who wore a face mask outdoors where this behavior was not mandated maintained a greater interpersonal distance from other individuals than did those who were not masked while walking outdoors. As with the delivery drivers who chose their safe-driving goal, choosing to perform one safe behavior (i.e., wear a face mask) generalized to the performance of another safe behavior (i.e., keep a safe interpersonal distance), which is contrary to risk compensation.

Activating Cognitive Dissonance

People need to feel congruence or consistency between what they think, feel and do. They experience tension or cognitive dissonance when perceiving an inconsistency between a behavior they chose to perform and another behavior, cognition or personal value (Festinger, 1957). The key word in that sentence is "chose." Individuals who feel coerced or incentivized into doing something do not feel uncomfortable if that behavior is inconsistent with a personal attitude, value or another behavior. Can an OSH intervention activate cognitive dissonance and thereby increase a person's self-accountability for injury prevention? That question is explored here, along with the critical relevance of perceived choice.

Recognizing an inconsistency between a personal conviction and self-directed behavior causes mental tension and self-motivation to restore congruity between a behavior and one's belief, attitude or value. Simply put, people want their actions to reflect their values, and vice versa. When an inconsistency between a value and a self-directed behavior is experienced, behavior is typically adjusted to match the value, rather than changing a personal value to match the behavior.

Safety as a Value

Many years ago, the author proposed that safety should be considered a value rather than a priority, and offered a reasonable rationale for that assertion, including the interpretation that priorities change as a function of situational factors, but values do not change so readily (Geller, 2003). When the author has asked audiences at safety conference sessions whether they hold safety as a value, almost everyone indicates that they do. Likewise, when this question is posed to individuals, an assertive confirmation is invariably declared. In fact, some say, "Safety is more than a value to me and my work team, it's a core value." Proclaiming safety as a value implies that safety is linked to all priorities. So, regardless of the circumstances, including outside demands on one's time, actively caring for safety takes precedence.

From Value Affirmation to OSH Behavior

An intervention process to activate cognitive dissonance and safety-related behavior can be simple and straightforward. Inspire people to declare safety as a value linked to the changing priorities of every workday. Then specify behaviors that are compatible versus incompatible with that value statement. Thus, cognitive dissonance can be

activated whenever someone points out a behavior that is inconsistent with safety as a core value.

For example, after observing an at-risk work behavior, remind the performer of the group consensus that safety is considered a value at their workplace. If the individual realizes the inconsistency, that worker should experience cognitive dissonance and proceed to resolve the behavior-value imbalance by substituting a safe behavior for the observed at-risk behavior. However, note the fundamental influence of perceived choice in this example. The individual's behavioral conviction should not be viewed as controlled by extrinsic contingencies such as incentives, disincentives or peer pressure, but by a personal decision to demonstrate safety as a core value. In other words, cognitive dissonance is only experienced when the behavior-value inconsistency is perceived as voluntary or self-directed.

Relatedly, years ago, the author described the “hypocrisy effect” and introduced an intervention to motivate the occurrence of safety-related behavior by having participants experience a discrepancy between what they have done in the past and what they should do (Geller, 2000). This intervention process is as follows:

- 1) present the rationale for a particular safe behavior,
- 2) ask the participants to make a commitment to always choose that safe behavior over designated at-risk practices, and
- 3) ask the participants to list the most recent times they have performed an at-risk alternative to the designated safe behavior.

Note how this hypocrisy-based intervention activates cognitive dissonance. The objective is to provoke participants into experiencing a discrepancy between their behavior and a self-directed commitment or personal-value statement. This triggers cognitive dissonance, which ends when self-directed action restores the imbalance.

The more public the commitment or value affirmation, the greater its impact. Thus, when people attest to safety as a value in the presence of others, they feel a special sense of obligation to live up to their affirmation. Those who hear someone declare safety as a value can readily activate cognitive dissonance within that individual by calling attention to a particular at-risk behavior they have observed from that person that does not reflect safety as a value.

Watch Your Language

In earlier writings, the author has indicated the negative impact of certain safety-related words on perceptions of choice and self-motivated engagement for OSH (e.g., Geller, 2002, 2020, 2021). The common phrases “Safety is a condition of employment” and “All accidents are preventable” stifle a sense of perceived choice or autonomy. In fact, the term “accident” implies a lack of personal control or perceived choice, and can be a commonsense excuse for an injury (e.g., “It was just an accident, and it was not anyone’s fault”). Similarly, when young children are said to have an “accident” in their pants, the presumption is that they could not help it—they had no choice.

Years ago, the National Highway Traffic Safety Administration advocated for using the words vehicle “crash” or “collision” instead of traffic “accident.” That recommendation has been followed quite consistently by transportation safety professionals, but not by the media nor by the public. Media outlets commonly report the occurrence of a traffic

“accident,” rather than a vehicle “crash.” Many safety professionals use the term “incident” rather than “accident,” but the term “incident” is also used to refer to intentional tragic events such as hate crimes and mass shootings.

Most workplace accidents are unintentional, but they are certainly not chance occurrences. Specific controllable environmental or human factors cause injuries, and most of those factors can be changed to prevent future occurrences of the mishap by conducting a comprehensive injury or close-call analysis. Note the use of the word “analysis” rather than “investigation.”

Consider that term “investigation,” as in “accident investigation” or “criminal investigation.” Doesn’t the word imply a search for one particular factor or person to blame for a particular injury? The mindset is fault-finding to uncover one root cause rather than fact-finding to identify environmental and behavioral factors that employers or employees can *choose* to change or improve to prevent a workplace injury.

Some other words commonly used by OSH professionals that stifle a perception of choice are:

- “mandate” rather than “expectation,”
- “requirement” rather than “opportunity,”
- “compliance” rather than “accomplishment,” and
- “peer pressure” rather than “peer support.”

Such choice-inhibiting language is used habitually or “accidentally,” and calls for corrective feedback from actively caring observers (Geller, 2019). For example, one article published in *Professional Safety* uses the word “accident” seven times (Wagner, 2023). Imagine the potential positive language impact if this best-selling author’s article, whose scholarship has been published in several well-known and respected publications, had used a term other than “accident,” such as “unintentional injury.”

Conclusion

The research-supported benefits of inspiring and supporting the perception of personal choice explicated in this article are not new to most OSH leaders. As noted, the advantages of facilitating perceived choice to increase occurrences of OSH-related behavior have been introduced in various books, journal articles and magazine columns. For example, two articles on safety leadership versus management advise leaders to encourage and support perceived choice, and explain why—from inspiring self-motivation (Geller, 2016) to facilitating response generalization (Geller, 2022a). However, none of those prior texts discuss all the evidence-based OSH benefits of perceived choice that are discussed here, from enhancing self-motivation and inspiring cognitive dissonance to decreasing risk compensation. Of course, the ultimate aim of promoting perceptions of personal choice is to enhance subjective well-being or human happiness. As expressed convincingly by Wagner (2023), “happy employees are safer employees” (p. 38).

The distinct value of perceived choice for enhancing self-directed behavior, participative management and response generalization, and for implementing BBS and a cognitive-dissonance intervention to motivate occurrences of safe behavior is supported by both common sense and empirical research. However, incorporating perceived choice in a workplace scenario can be easier said than done, especially for OSH-related responsibilities. This is

because many workplace cultures have approached OSH with a top-down rule-governing mindset. In such workplaces, the notion of involving workers in OSH-related decision-making seems unrealistic and far-fetched, from having employees define safe and at-risk behaviors and participate in injury analyses to involving workers in the implementation and evaluation of interventions to improve OSH. In other words, at many workplaces, OSH is the sole responsibility of the safety department and involving workers in creating, implementing and evaluating OSH-related interventions has not been considered.

Thus, incorporating perceived choice in OSH-related situations can be particularly challenging in some work cultures, suggesting a need to cultivate a work culture in which employees feel included with a sense of belongingness and interdependency regarding OSH, contribute to continuous OSH improvement as both a teacher and a learner, and feel comfortable suggesting work plans, practices or policies that are contrary to the status quo. Clarke (2020) refers to such a culture as “psychologically safe,” or a culture that promotes and supports interpersonal trust, interdependent collaboration and continuous improvement.

In a recent article, the author explains six leadership qualities that are vital to cultivating a psychologically safe culture (Geller, 2022b), as derived from the research of Jim Collins (2001) and his team. Cultivating a work culture in which perceived choice is integrated into various OSH-related interventions can feel overwhelming. Here’s a suggestion: Start small and build by using OSH-related language that supports rather than stifles the perception of choice. For example, it is not an “accident” but an “unintentional injury” that can be prevented by considering the variety of possible contributing environmental and human factors rather than one root cause, and by empowering workers to improve those factors that are within their domain of choice and personal control.

Finally, happiness and subjective well-being or life satisfaction can be enhanced by becoming more mindful of the numerous choices we have every day when performing ordinary activities. Instead of becoming mindless of habitual routines, become more mindful of the various possible alternatives to each set of potential behaviors, and appreciate the opportunity to willingly select options. **PSJ**

References

- Brehm, J.W. (1966). *A theory of psychological reactance*. Academic Press.
- Clark, T.R. (2020). *The 4 stages of psychological safety: Defining the path to inclusion and innovation*. Berrett-Koehler.
- Collins, J. (2001). *Good to great: Why some companies make the leap . . . and others don't*. Harper Collins.
- Deci, E.L. & Flaste, R. (1995). *Why we do what we do: Understanding self-motivation*. Penguin.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Row & Peterson.
- Geller, E.S. (1996). *The psychology of safety: How to improve behaviors and attitudes on the job*. Chilton.
- Geller, E.S. (2000, Sept. 28). A new method for motivating employees. *Industrial Safety and Hygiene News*, 34(10), 20-23.
- Geller, E.S. (2001). *The psychology of safety handbook*. CRC Press.
- Geller, E.S. (2002). *The participation factor: How to increase involvement in occupational safety*. ASSE.
- Geller, E.S. (2003, Feb. 28). Integrating safety into every routine. *Industrial Safety and Hygiene News*, 37(3), 16-18.

Geller, E.S. (2005). *People-based safety: The source*. Coastal Training Technologies Corp.

Geller, E.S. (2013) The psychology of self-motivation. In *Psychology: The Science of Experience* (7th ed., pp. 502-517). Allyn & Bacon.

Geller, E.S. (2016, June). Leadership lessons for safety professionals: How to nurture engagement for injury prevention. *Professional Safety*, 61(6), 63-71.

Geller, E.S. (2019). *Life lessons from psychological science: Understanding and improving interpersonal dynamics*. Cognella Academic.

Geller, E.S. (2020, July 28). The power of words: Ramifications for occupational health and safety. *EHS Today*, 13(7), 14-17.

Geller, E.S. (2021, June). Words matter: How safety talk can stifle engagement. *Professional Safety*, 66(6), 58-59.

Geller, E.S. (2022a, April). Managing behavior vs. leading people: Evidence-based lessons to achieve and sustain an injury-free workplace. *Professional Safety*, 67(4), 30-37.

Geller, E.S. (2022b, Jan.). Psychological safety: The optimal context for injury prevention. *Professional Safety*, 67(1), 18-20.

Geller, E.S., Lehman, G.R. & Kalsher, M.R. (1987). *Behavior analysis training for occupational safety*. Make-A-Difference.

Geller, E.S. & Williams, J.H. (Eds.). (2001). *Keys to behavior-based safety*. Government Institutes.

Hasanzadeh, S., de la Garza, J.M & Geller, E.S. (2020a). How sensation-seeking propensity determines individuals' risk-taking behaviors: Implication of risk compensation in a simulated roofing task. *Journal of Management in Engineering*, 36(5). [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000813](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000813)

Hasanzadeh, S., de la Garza, J.M. & Geller, E.S. (2020b). Latent effect of safety interventions. *Journal of Construction Engineering and Management*, 146(5). [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001812](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001812)

Janssen, W. (1994). Seat-belt wearing and driving behavior: An instrumented-vehicle study. *Accident Analysis and Prevention*, 26(2), 249-261. [https://doi.org/10.1016/0001-4575\(94\)90095-7](https://doi.org/10.1016/0001-4575(94)90095-7)

Ludwig, T.D. & Geller, E.S. (1997). Assigned versus participative goal setting and response generalization: Managing injury control among professional pizza deliverers. *Journal of Applied Psychology*, 82(2), 253-261. <https://doi.org/10.1037/0021-9010.82.2.253>

Oliver, M., Browning, S.L., Davis, M. & Geller, E.S. (2021). Face-mask wearing and social distancing: A test of risk compensation theory. *The Virginia Journal of Business, Technology and Science*, 1(1).

Peltzman, S. (1975). The effects of automobile safety regulation. *Journal of Political Economy*, 83(4), 677-726. <https://doi.org/10.1086/260352>

Skinner, B.F. (1971). *Beyond freedom and dignity*. Knopf.

Wagner, R. (2023, Jan.). A puzzle reveals the secret ingredient of safety. *Professional Safety*, 68(1), 37-38.

Wilde, G.J.S. (1982). The theory of risk homeostasis: Implications for safety and health. *Risk Analysis*, 2(4), 209-225. <https://doi.org/10.1111/j.1539-6924.1982.tb01384.x>

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