

# MANAGEMENT LEADERSHIP

## Improving Employee Safety Engagement

By Rebecca Mullins, Earl Blair and E. Scott Dunlap

**A THESIS CONDUCTED** in the safety and security department at Eastern Kentucky University focused on measuring levels of employee engagement at a large manufacturing facility in south-eastern U.S. (Mullins, 2018). The study analyzed four categories of self-reported employee level of 1) engagement with other employees; 2) engagement with management; 3) engagement with policies and procedures; and 4) employee self-initiative. The main question of the thesis was whether less-engaged employees are more likely to sustain an injury while on the job. A voluntary, anonymous Likert-scale survey was administered and completed by 171 hourly employees. The data analysis indicates that these engagement criteria relate to an employee's on-the-job injury status.

Two limitations applied to this study. First, it was a qualitative study focused on one manufacturing plant. The reader must determine transferable elements that can be applied to worker engagement in other contexts. Second, workers self-reported responses to survey questions, which introduces a degree of lack of control over the data collected. An assumption of the research was that all participants responded truthfully to questions.

*Engagement* was defined as active participation in safety activities across the four defined areas of investigation, such as "involvement in decision-making," as defined in

ISO 45001 (ISO, 2018).

Engagement in safety also included additional activities of participation as defined in ANSI Z10, such as being involved in safety committees and offering recommendations for safety improvement, where employees engaged in non-decision-making safety activities.

### Literature & Background

The concept of employee engagement has evolved and expanded since Kahn's (1990) study, which began with the premise:

People can use varying degrees of their selves, physically, cognitively and emotionally in work role performances, which has implications for both their work and experiences. . . . [the article describes and illustrates] three psychological conditions—meaningfulness, safety and availability—and their individual and contextual sources. (p. 692)

### Background: Research Indicates Employee Engagement Impacts Safety Performance

An empirical study at Indiana University provided evidence of a significant relationship between organizational safety climate and injuries (Seo, Torabi, Blair, et al., 2004). In addition, Clarke (2006) conducted a "meta-analysis to examine the criterion-related validity of the relationship between safety climate, safety performance (participation and compliance), and occupational accidents and injuries." The study supported the hypothesis "linking organizational safety climate to employee safety compliance and participation, with the latter demonstrating a stronger relationship" (Clarke).

Dodge Data and Analytics (2016a) conducted a study that examined the use of safety management practices among 254 U.S. contractors. Contractors reported more benefits from their investments in safety management practices with a growing recognition of the need to actively engage workers to improve project safety. According to the report, worker involvement is the most widely recognized aspect of a world-class safety program, selected by 85% of the contractors surveyed in 2016, which was a 19% increase over 2012. James Dorris, EHS vice president at United Rentals, explains, "When workers are made a part of the process and are provided the tools and training they need to succeed, safety becomes recognized as the one thing that sets them, and the company they work for, apart from the others" (Dodge Data & Analytics, 2016b).

Workers' perceptions of safety climate, often explained as both the perceptions and expectations that employees have regarding their safety in their organizations, have been regarded as a principal guide to safety performance (Gyeyke, 2005). Gyeyke explains:

### KEY TAKEAWAYS

- Research supports the supposition of a strong connection between employee engagement and safety performance.
- This article emphasizes the importance of getting all employees meaningfully engaged in all aspects of safety.
- It examines the implications of a recent study measuring employee safety engagement.
- It also provides practical recommendations on how management can institute leadership approaches that result in employees being more motivated to engage in safety.



Researchers have noted that workers with a negative perception of safety climate tend to engage in unsafe acts, which increase their susceptibility to accidents, and workers who perceive job insecurity, anxiety and stress have exhibited a drop in safety motivation and compliance whereas workers with a positive perception of their workplace safety have registered fewer accidents. (p. 292)

The extent to which workers view their organizations as being supportive, concerned and caring about their general well-being and satisfaction likely affects workers' perception of the organizational safety climate and influence safe work behaviors and the frequency of incidents (Gyekye, 2005).

### Government-Related Recommendations for Employee Participation

Government agencies, standards-setting organizations and numerous consultants presume that employee engagement is a positive force for safety. These entities and individuals have given practical advice about employee engagement.

An example of a government administration that promulgates employee participation is illustrated in OSHA's (2016) safety and health program guidelines. A core element of the seven recommended practices is worker participation. This section identifies action items and describes how to accomplish each:

- Action item 1: Encourage workers to participate in the program.
- Action item 2: Encourage workers to report safety and health concerns.
- Action item 3: Give workers access to safety and health information.
- Action item 4: Involve workers in all aspects of the program.
- Action item 5: Remove barriers to participation (OSHA, 2016).

### Safety Standards Mandating Employee Participation

Safety management standards that mandate employee engagement include ANSI/ASSP Z10 and ISO 45001, each titled "Occupational Health and Safety Management Systems" (OHSMS). ANSI Z10 Section 3.0 is titled "Management Leadership and Employee Participation." Manuele (2014) considers

this the most important section of the Z10 standard. Section 3.2, "Employee Participation," states, "The organization shall establish a process to ensure effective participation in the OHSMS by its employees at all levels of the organization, including those working closest to the hazards" (ANSI/ASSP, 2017). ANSI/ASSP Z10 includes informative appendixes. Appendix C provides additional information to support Section 3.2. Appendix C, "Encouraging Employee Participation," provides five pages of detailed information regarding how organizations can effectively encourage employee participation for continuous improvement.

ISO 45001 defines participation as "involvement in decision-making" (ISO, 2018). Section 5 of ISO 45001 is titled "Leadership and Worker Participation." Section 5.4, "Consultation and Participation of Workers," states:

The organization shall establish, implement and maintain a process for consultation and participation of workers at all applicable levels and functions, and, where they exist, workers' representatives, in the development, planning, implementation, performance evaluation and actions for improvement of the OHSMS. (ISO, 2018, p. 10)

ISO 45001 includes a number of points for guidance on how to accomplish this goal.

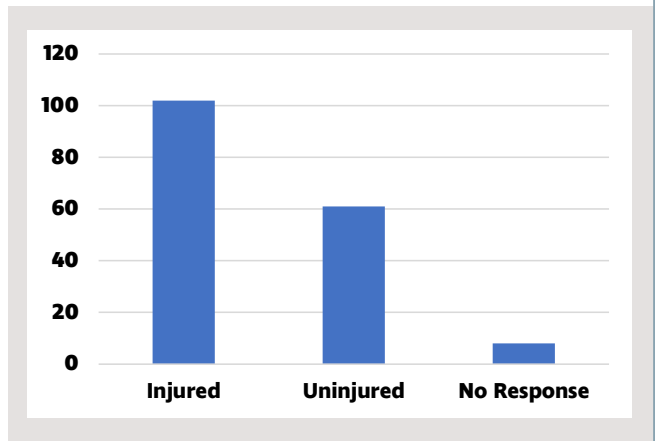
### Methodology

Building on existing literature that addresses the issue of worker engagement in workplace safety, Mullins (2018) sought to determine whether the level of engagement in workplace safety has a potential influence on injuries sustained, such as whether workers who were more engaged experienced a lower rate of injury. A survey was issued that included 20 questions that solicited Likert scale responses to explore the four areas of employee engagement:

- employee engagement with other employees;
- employee engagement with management;
- employee engagement with policies and procedures;
- employee self-initiative.

Those surveyed included the complete population of a manufacturing facility. During one of the weekly "Take a Minute" meetings within each department, supervisors distributed and

**FIGURE 1**  
**EMPLOYEE INJURY EXPERIENCE**



collected the surveys. Participants voluntarily and anonymously completed the survey. Salaried employees were not included in the survey. Employees on both first and second shifts were surveyed. The survey collected demographic data that included age, gender, level of education, length of employment, pay grade and injury status. The manufacturing facility employed 220 hourly workers, 171 of whom completed the survey (78% response rate).

Data were analyzed solely through the use of descriptive statistics. Percentages were calculated and used to identify findings based on participant responses to questions that addressed the four areas of employee engagement and injury experience.

### Study Results

The study identified strong relationships between an employee's injury status and the four areas of employee engagement. Following are the findings and analyses of the data.

**1) Employees who experienced work-related injuries reported low levels of engagement.** Nearly 60% of respondents reported that they had been injured at some point during their employment at the facility (Figure 1). More than 45% of these respondents reported working at the facility for more than 5 years (Figure 2).

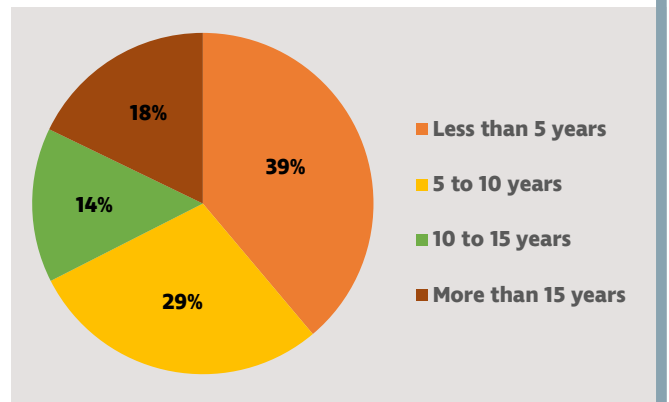
Nearly 70% of injured workers reported that they sometimes, seldom or never reviewed their job risk analysis (JRA).

More than one-third (34.3%) of employees who reported sustaining an injury during their employment at the facility reported that they do not always fully complete lockout/tagout procedures (Figure 3). Failure to review JRAs and failure to conduct a full completion of lockout/tagout procedures identifies a weakness in an employee's engagement with policies and procedures, as well as a low level self-initiative for safety.

Only 39% of respondents reported that they would mostly or always like to meet with management to solve safety concerns. Of the 102 respondents who had reported an injury during their employment at the facility, 82 (80.4%) reported that they are not always in full support of new policies and procedures.

Nearly three-quarters of respondents (73.5%) who reported that they had been injured at some point during their employment at the facility felt that safety policies and procedures sometimes got in the way of doing their job.

**FIGURE 2**  
**INJURY PREVALENCE BY YEARS OF EXPERIENCE**



These findings indicate a need for management to involve employees in the development and implementation of safety policies and procedures. Currently, employees are not engaged in these activities to a great degree. Employee engagement could influence safety performance improvement through buy-in and an understanding of why safety policies and procedures are important. Additionally, management can establish a welcoming and nonpunitive environment for employees to feel comfortable coming to management to address and help solve their safety concerns.

**2) Employees who reported no job-related injuries reported a higher level of engagement** (Figure 4). More than one-third of respondents (35.6%) reported that they had not been injured during their employment at the facility. Of these respondents, 54% reported that they worked at this facility for more than 5 years. The following responses indicate a vast difference between engaged and nonengaged employees:

- 95% of these employees reported that they mostly or always follow safety procedures.
- 88.5% reported that they would sometimes, mostly or always confront another employee about an unsafe act or behavior.
- 91.8% reported that they mostly or always wear PPE in good condition.
- 78.6% reported their likelihood to report an unsafe act or behavior to management as sometimes, mostly or always.
- 91.8% reported that they sometimes, mostly or always support new policies and procedures.

### Categories of Employee Safety Engagement

The study included four categories of employee safety engagement.

#### Category 1: Employee Safety Engagement With Other Employees

Only 6.4% of respondents reported "mostly" or "always" to all the questions measuring employee engagement with other employees. These questions identified 1) whether an employee would confront another employee about an unsafe act; 2) the likelihood of the employee to participate in discussion during safety meetings or training; 3) whether the employee participated in group pre-shift stretching; and 4) whether the employee communicates with other employees outside of work.

A majority of respondents (57.9%) reported that they sometimes, seldom or never participate in discussion during safety meetings and training. The consequences of this low level of engagement with other employees meant that potential ideas to improve safety efforts may go unheard, or that management may be less likely to be aware of hazards that must be identified and corrected.

One-third of respondents (33.3%) reported that they would always confront an employee about an unsafe act or behavior. More than one-quarter of respondents (27.4%) said that they would always report an unsafe act or behavior. These data suggest that many unsafe acts and near-hit situations go unnoticed and unreported by colleagues or supervisors. This is important because a reporting culture is a prerequisite for an effective safety culture (Reason, 1997).

The data indicate that employees communicate with each other outside of work. A majority of these employees (64%) indicated that they would confront another employee about unsafe behavior. Confronting a colleague can be a daunting task, but when employees form bonds and relationships with colleagues, they become emotionally invested in their well-being, both at and away from work.

### Category 2: Employee Safety Engagement With Management

The data indicate less than 20% of respondents (19.8%) reported “mostly” or “always” to all of the questions measuring employee engagement with management. Questions in this area addressed whether an employee would 1) want to meet with management to solve safety issues; 2) suggest new ideas to improve safety; and 3) whether they would report an unsafe act or behavior to management that they personally observed. More than 80% of respondents reported “sometimes,” “seldom” or “never” to these questions, indicating an opportunity to more fully explore why employees are not engaged in these activities, as reasons could range from employees simply not caring to management creating a culture in which such activity is not encouraged.

Data indicate that more than 85% of employees who had been at the company for 5 years or less would like to be involved with management to solve safety issues. This was in contrast to less than 40% of employees overall who reported wanting to meet with management to solve safety issues. These data indicate a potential shift in the safety culture where more than half of the employees hired in the past 5 years have experienced an injury but, given the opportunity, they would like to work with management to solve safety issues and prevent these injuries from happening again.

### Category 3: Employee Engagement With Safety Policies & Procedures

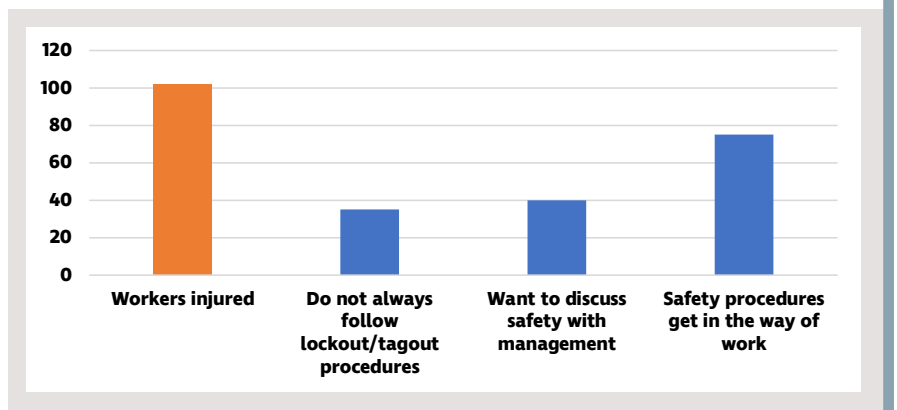
The data collected indicate a high degree of noncompliance with safety policies and procedures at the facility. The data suggest a connection between noncompliance and employee injury status.

Questions in this category identified whether an employee 1) follows safety policies; 2) gets frustrated when employees do not follow safety policies; 3) identifies that employees never take shortcuts; 4) supports new safety policies and procedures; 5) fully completes lockout/tagout, and feels that safety policies and procedures do not get in the way of completing their job. Less than 20% of respondents (16.3%) reported “mostly” or “always” to all of the questions measuring employee engagement with policies and procedures.

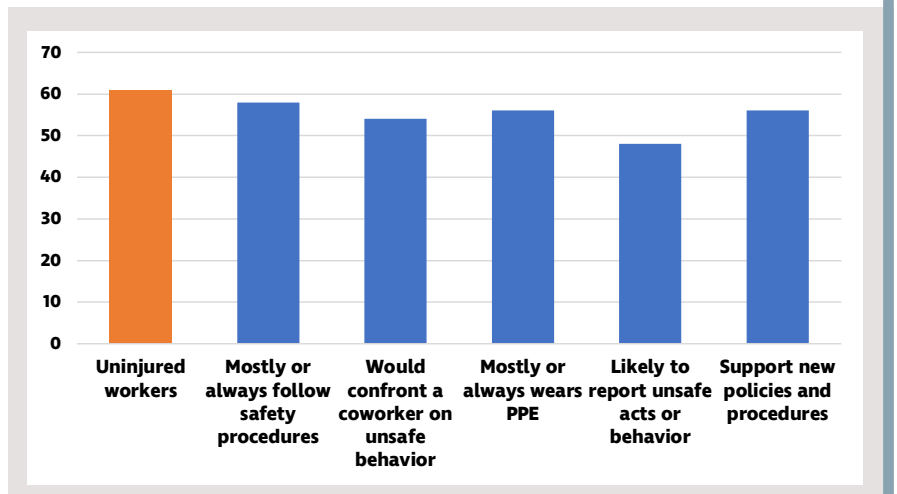
### Category 4: Employee Self-Initiative Related to Safety Solutions

Less than 10% of respondents (7.60%) reported “mostly” or “always” to questions measuring employee self-initiative. These questions addressed whether the employee 1) is likely to be in-

**FIGURE 3**  
**REACTION TO SAFETY AMONG INJURED EMPLOYEES**



**FIGURE 4**  
**REACTION TO SAFETY AMONG UNINJURED EMPLOYEES**



volved in a solution to a safety concern; 2) would fix an unsafe situation if s/he could; and 3) reviews the JRA prior to a shift.

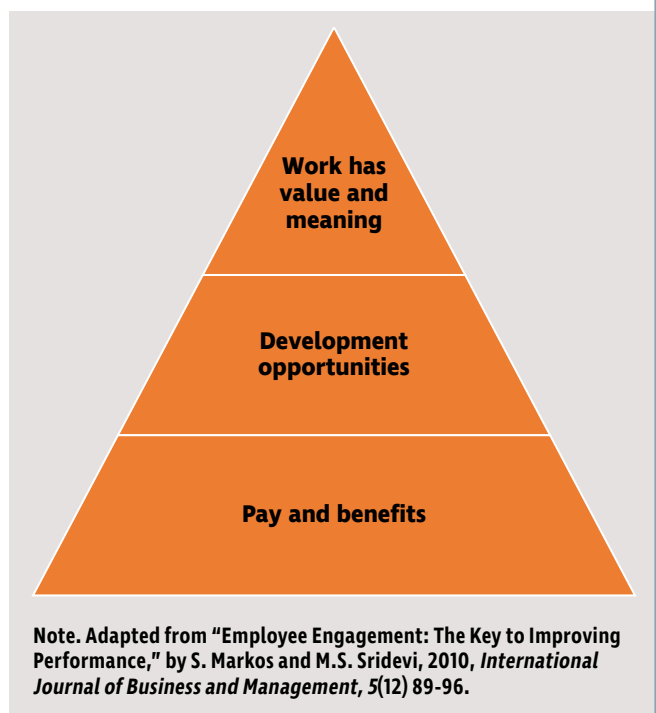
Conversely, nearly 80% of employees reported that they think about safety while at home with their families, and more than 87% admit that they would like to be rewarded for their safety efforts.

An association existed between gender and whether an employee thinks of safety while at home. Of respondents who identified as female, 87.5% reported that they “mostly” or “always” think of safety while at home with family. In contrast, 65.4% of respondents who identified as male reported that they “mostly” or “always” think of safety while at home with family.

### Study Conclusions

The data collected identifies strong relationships between employee engagement and workplace injuries. This study concluded that at the facility surveyed, unengaged employees are in fact much more likely to sustain a workplace injury as compared to their well-engaged colleagues. Disengaging with policies and procedures introduces an opportunity for error, increasing an employee’s risk of injury. For example, bypassing any part of lockout/tagout procedures can increase the risk associated with the unintentional start-up of a machine during maintenance. More than 60% of employees who reported that they do not always fully complete lockout/tagout also reported sustaining a workplace injury, identifying a distinct relationship between employee engagement with policies and procedures and workplace injuries sustained. Among injured employees, 73.5% also reported that safety policies and procedures at some point got in the way of doing their job. If these employees chose to bypass safety procedures, they may have put themselves at risk of injury.

**FIGURE 5**  
**HIERARCHY OF ENGAGEMENT**



This study, although limited to one manufacturing plant, supports previous literature of the need to engage employees in occupational safety. Such engagement can result in a reduction in injury occurrence. The study also supports the inclusion of employee engagement in ANSI Z10 and ISO 45001 as a core component of an effective OSH management system.

### Recommendations for Increasing Meaningful Employee Engagement

As noted, in ISO 45001 management leadership and employee participation are fundamentally connected activities. More than 80% of respondents in this study indicated negative perceptions of management and management involvement. Organizational leaders can address these perceptions by creating a culture in which management engagement in safety is encouraged and included as a requirement in management annual performance evaluations. Accomplishing this objective could include identifying structured avenues through which operations management can obtain continuing education in the value and need of including safety in daily operational activity and how efforts in safety help achieve the organization’s operational goals.

The following roles are recommended for effective safety engagement of employees, both hourly and management.

#### 1) Employees’ Role as Safety Advocates

Encourage employees to become safety advocates.

•**Give employees a voice.** Cooper (2015) notes, “Safety is a social activity.” Leaders should institute a system that encourages employees to be engaged and gives them a voice.

The conclusion of a recent study on compliance from an employee engagement perspective supports the notion of the importance of employee voice and participation:

Drawing on Kahn’s engagement theory, we identified two behaviors through which employees might contribute to an effective procedure management system: allocation of effort in complying with the procedures, and voicing their thoughts and opinions about the procedures they use. Our results indicated that when employees perceive the procedures are useful for their jobs, they are more likely to invest in their effort when complying with procedures. When they are more confident with their job, they are more likely to speak up about their opinions about the procedures. Furthermore, we also found that supervisor could facilitate the perceived usefulness of procedures and employees’ job self-efficacy by helping employees to achieve their job goals. (Xiaowen, Griffin, Yeo, et al., 2018)

•**Provide opportunities for employee development.** One of Deming’s (2000) 14 points for management is, “Institute a vigorous program of education and self-improvement.” He encourages education and self-improvement for everyone. A genuinely vigorous program of education and training will help employees become deeply engaged, better appreciate the organization they work for, and enable them to be more knowledgeable and safer workers. Figure 5 shows hierarchy of engagement (compared to Maslow’s hierarchy of needs) where all employees are consistently treated with respect and corrective actions are taken promptly for safety deficiencies.

•**Establish and implement strategic safety measures.** Well-designed safety metrics that focus on leading indicators and measures of success versus measures of failure release

motivation of the workforce to be engaged. Employees are more likely to buy in to safety when they are involved in the development of safety metrics. Three specific benefits of these strategic safety measures that are process-based (rather than outcome-based) include:

- illuminate (or clarify) safety expectations;
- increase safety awareness;
- influence supportive and safe behaviors (Blair, 2017).

Blair (2017) also describes practical applications of strategic safety measures and additional benefits.

## 2) Management's Role as Servant Leaders for Safety

Institute management's role as servant leaders for safety.

•**Management engagement with employee safety is key.** Management engagement is a primary safety responsibility. Geller (2008) suggests leaders must be held accountable and take responsibility for failure in workplace safety. In a case study involving the impressive turnabout in safety at General Motors (GM), Simon and Frazee (2005) repeat a quote from GM's president's council: "Continuous leadership involvement is the single most important factor for success."

If management sets an example by engaging with employees, especially as it relates to safety, it seems logical that employees will be more engaged in safety themselves.

Dunlap (2011) identifies a key to encouraging employee engagement: management engagement. Managers commonly engage in safety when reacting to an incident. In some cases, this may be the only time that management gets involved. Dunlap states, "Rather than becoming involved only when an incident occurs, ongoing engagement in the safety program allows managers to understand an incident within the context of the comprehensive safety management system" (p. 45).

•**Consistently treat all employees with respect.** Treating all employees with respect cannot be overemphasized. Research indicates that the strongest indicator of positive safety performance is when employees perceive they are respected by the management of their organizations. "The pivotal finding from Erickson's research (1994) is the way in which employees are treated is the factor most significantly related to the level of safety performance" (Erickson, 2008). This finding might be somewhat surprising to many in the safety profession who may assume the factor most related to the level of performance is the professional's level of expertise or some other factor, such as an employee's level of safety awareness or understanding of safety regulations.

Paul O'Neill (2014) emphasizes that in organizations with the potential to be great, all employees are treated with respect at all times. As CEO of Alcoa, O'Neill focused on safety to an extreme level; he started with safety because it cuts across all units and aspects of the organization, and he believed that action in safety is part of the bigger picture in life. O'Neill believed that organizations should establish environments resulting in employees experiencing purpose and meaning in their work.

Treating people with respect is a universal and enduring principle. It is not a technique or program of the month. Treating employees with respect is an overarching principle and a prerequisite to meaningful employee engagement and motivation for safety.

•**Engage by listening to employee concerns and taking corrective actions.** Judith Komaki developed a leadership model, the operant model of effective supervision. Komaki (1998)

says, "If we had to sum up all that we have learned in the past decade, we would encourage those who aspire to heighten their leadership talent to lead by listening."

A specific element of respect involves listening intently and listening for opportunities when others speak. The best leaders are great listeners. Listening with the intent to respond and solve safety issues is just as important as talking or coaching about safety.

•**Servant leadership is a superior approach.** Cooper (2015) found strong support in the literature for servant leadership as a superior approach to safety performance. Cooper's research revealed that servant leadership has a greater influence on employee engagement than other styles of leadership and "creates a supportive environment that exerts a much stronger influence on employee engagement, safety behavior and incident reduction" (Cooper, 2015).

Sarkus's (1996) article on servant leadership in safety describes traits of the servant leadership model, which include believing that problems and solutions are found within, emphasizing the growth and needs of others, and providing a participatory model of leadership. Servant leadership develops a foundation of trust, and gives employees a voice so they can advocate for safety.

A strong safety culture requires visible, ongoing leadership support. From a practical standpoint, leaders can practice servant leadership as it relates to safety. Two basic and important activities that fall under the umbrella of servant leadership include (Blair, 2018):

1) Practicing safety leadership by walking around and focusing on people, their needs and safety. These walks should not be confused with inspections or audits.

2) Following up on necessary safety corrective actions.

Some of the benefits of walking around while focusing on caring, listening and safety include:

- helping employees find their voice;
- building trust levels;
- increasing management knowledge;
- demonstrating a visible commitment to safety;
- reinforcing the safety process;
- demonstrating that leaders care through safety walks

(Blair, 2018).

•**Servant leadership is primarily about character, not technique.** Leadership is more than a technique. There are individuals whose titles infer leadership, but who exhibit very little leadership, and there are many employees without such titles who demonstrate great influence and character. Greenleaf (1991) defines *servant leadership* as:

The servant leader is servant first . . . it begins with the natural feeling that one wants to serve, to serve first. Then, conscious choice brings one to aspire to lead . . . to make sure other people's highest priority needs are being met. The ultimate test of servant leadership is: Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become leaders?

A distinction Hunter (2004) makes is that leadership is about character. Hunter said character is about doing the right thing, and leadership is also about doing the right thing. Hunter's distinction between management and leadership is "Management is what we do. Leadership is who we are."

Hunter (2004) claims we have glorified and complicated leadership. Leadership is not primarily about personality, because personality deals with style. Leadership is about character, because character and leadership both deal with substance. Servant leadership involves more than simply learning from a book or seminar. It is a mind-set and a skill that can be learned and mindfully practiced. Hunter and others make additional points about leadership and servant leadership, such as:

- leadership is a “latent skill waiting to be developed in most people,” (Hunter, 2004);
- leadership is “character in action,” (Hunter, 2004);
- leadership can be defined as influence (Maxwell, 1993);
- the test of servant leadership: Does it help those who are served to grow? (Greenleaf, 1991).

Hunter (2004) emphasizes that leadership development and character development are one. He further describes how consistently making ethical choices and establishing habits of integrity develops character that makes powerful leadership possible.

## Conclusion

Management’s leadership is the key to gaining eager and meaningful employee engagement. Management must ensure that all employees are always treated with respect, employees are listened to and given a voice for safety, and existing hazards are corrected or dealt with appropriately. The recommended approach to accomplish this is to institute education and expectations to apply servant leadership in an organization. **PSJ**

## References

- ANSI/ASSP. (2017). Occupational health and safety management systems [ANSI/ASSP Z10-2012(R2017)]. Park Ridge, IL: ASSP.
- Blair, E. (2017, Feb.). Strategic safety measures: Seven key benefits. *Professional Safety*, 62(2), 32-39.
- Blair, E. (2018). 3 keys to building a strong safety culture. *Safety Decisions*, 4(3), 12-17.
- Clarke, S. (2006). The relationship between safety climate and safety performance: A meta-analytic review. *Journal of Occupational Health Psychology*, 11(4), 315-327.
- Cooper, D.M. (2015, Feb.). Effective safety leadership: Understanding types and styles that improve safety performance. *Professional Safety*, 60(2), 49-53.
- Deming, W.E. (2000). *Out of the crisis*. Cambridge, MA: MIT Press.
- Dodge Data & Analytics. (2016a). Building a safety culture: Improving safety and health management in the construction industry. SmartMarket Report. Bedford, MA: Author.
- Dodge Data & Analytics. (2016b, Apr. 12). Construction industry is split across a safety culture spectrum (Press release). Retrieved from [www.construction.com/news/construction-industry-split-across-safety-culture-spectrum-apr-2016](http://www.construction.com/news/construction-industry-split-across-safety-culture-spectrum-apr-2016)
- Dunlap, E.S. (2011, Sept.). Safety leadership: Finding common ground. *Professional Safety*, 56(9), 42-49.
- Erickson, J.A. (2008, Nov.). Corporate culture: Examining its effects on safety performance. *Professional Safety*, 53(11), 35-38.
- Geller, E.S. (2008, March). People-based leadership: Enriching a work culture for world-class safety. *Professional Safety*, 53(3), 29-36.
- Greenleaf, R.K. (1991). *Servant leadership: A journey into the nature of legitimate power and greatness*. Mahwah, NJ: Paulist Press.
- Gyekye, S.A. (2005). Workers’ perceptions of workplace safety and job satisfaction. *International Journal of Occupational Safety and Ergonomics*, 11(3), 291-302.
- Hunter, J.C. (2004). *The world’s most powerful leadership principle: How to become a servant leader*. New York, NY: Crown Business.
- International Organization for Standardization (ISO). (2018). Occupational health and safety management systems—Requirements for guidance for use (ISO 45001:2018). Retrieved from [www.iso.org/standard/63787.html](http://www.iso.org/standard/63787.html)
- Kahn, W.H. (1990). Psychological conditions of personal engagement and disengagement at work. *The Academy of Management Journal*, 33(4), 692-724.
- Komaki, J. (1998). *Leadership from an operant perspective*. London, U.K.: Routledge.
- Ludwig, T.D. & Frazier, C.B. (2012). Employee engagement and organizational behavior management. *Journal of Organizational Behavior Management*, 32(1), 75-82.
- Manuele, F.A. (2012). *Advanced safety management: Focusing on Z10 and serious injury prevention* (2nd ed.). Hoboken, NJ: John Wiley & Sons.
- Markos, S. & Sridevi, M.S. (2010). Employee engagement: The key to improving performance. *International Journal of Business and Management*, 5(12) 89-96.
- Maxwell, J.C. (1993). *Developing the leader within you*. Nashville, TN: Thomas Nelson Inc.
- Mullins, R. (2018). *Measuring employee engagement: Are engaged employees less likely to sustain a workplace injury?* (Master’s thesis). Available from Online Theses and Dissertations, 545.
- O’Neill, P. (2014, Feb.). Paul O’Neill on safety leadership [Video]. Retrieved from <https://youtu.be/0gvOrYuPBEA>
- OSHA. (2016). Recommended practices for safety and health programs (Publication No. OSHA 3885). Retrieved from [www.osha.gov/shpguidelines](http://www.osha.gov/shpguidelines)
- Reason, J. (1997). *Managing the risks of organizational accidents*. Aldershot, U.K.: Ashgate Publishing.
- Sarkus, D.J. (1996, June). Servant-leadership in safety: Advancing the cause and practice. *Professional Safety*, 41(6), 26-32.
- Seo, D.C., Torabi, M.R., Blair, E.H., et al. (2004). A cross-validation of safety climate scale using confirmatory factor analytic approach. *Journal of Safety Research*, 35(4), 427-445.
- Simon, S.I. & Frazee, P.R. (2005, Jan.). Building a better safety vehicle: Leadership-driven culture change at General Motors. *Professional Safety Journal*, 50(1), 36-44.
- Svensden, E. (2016). 6 drivers of employee engagement: The road rules of the “super” culture highway [PowerPoint presentation]. Presented at BLR Safety Culture 2016, Austin, TX.
- Williams, J.H. (2008). Employee engagement: Improving participation in safety. *Professional Safety*, 53(12), 40-45.
- Woods, S.A. & Sofat, J.A. (2013). Personality and engagement at work: The mediating role of psychological meaningfulness. *Journal of Applied Social Psychology*, 43(11), 2203-2210.
- Xiaowen, H., Griffin, M., Yeo, G., et al. (2018). A new look at compliance with work procedures: An engagement perspective. *Safety Science*, 105, 46-54.

---

**Rebecca Mullins, M.S.**, is an environmental, safety and health specialist in the steel fabrication industry in Louisville, KY. She is a recent graduate of Eastern Kentucky University, and holds an M.S. in Safety, Security and Emergency Management and a B.S. in Criminal Justice.

**Earl Blair, Ed.D., M.S., CSP, FASSP**, teaches safety management courses at Indiana University in Bloomington, IN. He is a professor, author and a frequent speaker at corporate, national and international events. Blair received the Lifetime Achievement in Safety Award from BLR in 2018 and the honor of ASSP Fellow in 2019. He is a professional member of ASSP’s Central Indiana Chapter and a member of the Society’s Academics and Consultants practice specialties.

**E. Scott (Scotty) Dunlap, Ed.D., CSP**, is a professor in Eastern Kentucky University’s Safety, Security and Emergency Management graduate program where he teaches both campus and online courses and leads graduate student research. Dunlap is a professional member of ASSP’s Louisville Chapter, as well as a member of the Society’s Academics Practice Specialty.