Behavioral Science and Safety: Past, Present, and Future

Behavioral science has profoundly affected the state of safety, not just over the past 5 years but also over the past 3 decades. **By Judy Agnew, PhD**

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Early applications focused on behavior-based safety (BBS) and more recently have extended to the critical role of safety leadership and safety culture improvement. With this evolution, the future is likely to see behavioral science seamlessly integrated into not only safety but also all aspects of organizational performance. Because behavior is at the heart of safety and all other business objectives, the applications of behavioral science are virtually limitless.

The Past

Over 25 years ago, behavioral practitioners developed processes to better engage the most underutilized safety change agents—frontline performers. Behavioral science clearly showed that improving the human performance component of safety required establishing more frequent and immediate consequences to support critical safe behaviors. Analysis of at-risk behavior showed that the organizational and management systems did not do enough to support critical behaviors and indeed were sometimes in conflict with safe performance. Engaging those in the front line in pinpointing critical behaviors, observing themselves and each other for those behaviors, and having conversations about those behaviors led to improved safety performance.

As news of the positive impact of BBS spread, BBS consultants and processes proliferated. Some of these processes were clearly subpar and often not based on the science of behavior at all. The ultimate failure of these subpar programs resulted in the rise of some anti-BBS sentiment, as poorly designed and executed processes were lumped

in with well-designed ones. Although these misunderstandings persist in some circles, the collective evidence supporting their efficacy has established BBS as a valuable component of many organizations' safety management systems. However, BBS is only the tip of the iceberg in terms of what behavioral science has to offer safety. With a fuller understanding of the science, organizations can achieve much broader safety improvements.

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The Present

Early BBS processes quickly addressed the low-hanging fruit, where frontline performers simply needed help developing safe habits. As these processes evolved and matured, it became evident that the more persistent behavioral issues required changing management systems and practices. Thus, today's behavioral applications have an increased focus on management behaviors. One component of this involves modifying how leaders interact with others—for example, increasing the frequency and nature of safety interactions, discussing safety just as often as production, responding more productively to incidents and near misses, working cooperatively with the front line to understand barriers to safety, and increasing the use of positive coaching strategies to shape important safety behaviors. A second component involves assessing and adjusting systems that affect safety, such as critical work procedures, near-miss reporting systems, incident investigations, hazard identification and remediation systems, and consequence systems. A scientific understanding of behavior enables leaders to design or redesign systems that will better enable and encourage safe work.

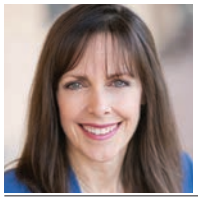
Increased interest in safety culture development is also responsible for expanded application of behavioral science to safety. Descriptions of ideal safety cultures typically include the following elements: proactive safety management (including a focus on leading indicators), responding to incidents and near misses as opportunities to learn, high levels of management and employee engagement, and a "want to" vs. "have to" approach to safety compliance. All of these features of safety culture require a significant shift in management strategy away from traditional "safety cop" (blame and train) approaches to more positive and cooperative coaching approaches. This shift must start with an assumption that the vast majority of employees have good intentions, that most deviations in safe behavior are a function of systemic causes, and that overuse of discipline and other negative consequences around safety actually undermines safety culture improvement. These shifts are a significant departure from current practice in most organizations. Changing the culture requires deliberate, evidence-based strategies. Behavioral science defines culture as "patterns of behavior, strengthened or weakened by people or systems, over time." The science helps organizations define the patterns of behavior required for their ideal safety culture and, importantly, teaches how to strengthen those behaviors through people and systems.

The Future

Organizations that have been using behavioral science to improve safety behaviors at the frontline, management, and cultural levels inevitably begin to generalize the knowledge and strategies to improve behaviors related to other organizational objectives. Although many organizations have been using the science for decades to maximize performance in quality, customer service, on-time performance, and productivity, starting with a focus on safety is ideal. By creating a strong foundation of safe behaviors and safety leadership behaviors, strategies for improving other objectives can be added more systematically to avoid inadvertently creating systems and processes that compete with safety. A scientific approach helps organizations achieve the ultimate goals of safe production, safe quality, and safe customer service.

Summary

Everyone in a leadership role is ultimately in the business of managing behavior, so behavioral science should become the way everything is managed in the organization. Companies that make this transition will be more effective, more efficient, and more adaptable, as leaders and frontline performers understand how to change behavior quickly to adapt to changing demands. SD



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