

Results of a Behavior-Based Safety Survey:

Appreciation but Misunderstanding and Missed Opportunities

Last September, ISHN published a survey in support of our two-year research grant from the National Institute for Occupational Safety and Health (NIOSH) to study the critical success factors for behavior-based (B-B) safety. The survey assessed readers' opinions and applications of B-B safety, and the results were informative and instructive. In general, they revealed substantial appreciation for this approach to injury prevention, while also suggesting some misunderstanding, misapplications, and missed opportunities. The results of this survey are summarized here, along with some basic principles and lessons learned.

Support from a Biased Sample

Before the end of 1996, 162 completed surveys were returned to us by mail or fax. An appreciation of the B-B approach was shown by 80% (n=129) of the respondents responding "yes" to the question "Do you believe behavior-based safety is a viable approach for reducing at-risk work behaviors and activities?" (Only 3% responded "no" to this question; the rest said they didn't know). In addition, more respondents responded "no" (48%) than "yes" (34%) to the question, "Do you think a safety program should put more direct focus on attitudes than on behaviors?" This is interesting because it not only shows preference for a B-B approach, it reflects a shift from the traditional educational approach to injury prevention.

The astute reader will note, however, that the sample of surveys we analyzed was not random and was likely biased toward the B-B approach. The survey was presented within the context of research aimed at discovering how to make the B-B approach more effective. Thus, it's likely most people who took the time to complete and return the survey were at least interested in this particular approach to industrial safety. Indeed, several respondents asked

specifically to be included in our sample of organizations my research associates will visit this year for on-site evaluation of factors contributing to the impact of a B-B safety process.

So it's likely the results of our survey were biased by sample selectivity. Compared to the average reader of ISHN, those who answered the questions and returned our survey were probably more informed about B-B safety and had higher confidence in the effectiveness of B-B safety. Even with this positive bias, however, the survey revealed some misperceptions about B-B safety which can limit its application for safety improvement. Lets consider certain characteristics of B-B safety which according to our ISHN survey need some clarification.

What is Behavior-Based Safety?

The first part of the survey asked respondents to give their impression of B-B safety by checking all of the items they believe are true from a list of 16 possible characteristics. In general, the respondents' selections indicated accurate knowledge about B-B safety, but there were a few notable exceptions.

The three items selected most often as reflecting B-B safety were: 1) an intervention approach for increasing safe behavior (selected by 143 respondents); 2) an observation and feedback process (n=130); and 3) a tool for managing safety (n=114).

Relatively fewer respondents considered other characteristics of B-B safety to be relevant. Specifically, only 42 of the 162 respondents considered B-B safety an approach useful for investigating injuries. Only 88 respondents felt B-B safety is useful for evaluating safety achievement, and 99 respondents considered B-B safety an intervention approach for decreasing unsafe behavior.

I suspect many people have a rather narrow viewpoint about B-B safety. This limited perspective is also reflected in numerous safety articles, sales pitches from safety consultants, and presentations at safety conferences. But, B-B safety is much more than a tool for doing

observation and feedback. It is actually “a general philosophy that can be applied to many aspects of safety management.” This general definition was actually the most accurate item on our survey checklist, and was checked by 115 of the 162 respondents.

Many sources, including my recent book (*The Psychology of Safety*), explain how B-B safety can be applied effectively to injury investigation, education and training, evaluation, ergonomics, and the design of incentive/reward programs. Indeed, behavioral research has shown clear benefits from integrating principles of B-B safety to each of these aspects of injury prevention and loss control.

Space limitations prevent me from giving comprehensive rationale for considering B-B safety a general approach to safety management rather than only a tool for increasing safe behavior. But three basic principles of B-B safety are instructive in this regard.

Principle 1: Target Observable Behavior for Intervention

Organizational and community research has shown over and over that it’s easier and more cost-effective to affect large-scale change when behaviors rather than attitudes get the direct focus. Attitude and other subjective feeling states are changed indirectly when behavior-based techniques are applied appropriately.

Principle 2. Focus on Positive Consequences to Influence Behavior Change

Behavior-based interventions manipulate external or environmental factors to motivate change. Environmental events that occur before behavior (such as signs, memos, demonstrations, and group discussions) can direct our actions, but we actually perform the behavior for the consequences we expect to receive. In other words, the antecedent events tell us what to do in order to receive a motivating consequence. This principle reflects the fact that positive consequences should be used more often than negative consequences to accomplish

desired change in both behavior and attitude. (Please see my last three *ISHN* articles on 1) giving, and 2) receiving recognition, and 3) celebrating safety achievement.

Most survey respondents were apparently aware of this principle since only four individuals indicated that B-B safety was “an approach focusing on the use of punishment to decrease unsafe behavior.” However, a different story emerged when the survey asked respondents to check which techniques were used in their plant “to influence safety-related behaviors in the workplace.”

Activators (or antecedent strategies) were most popular, with policies (n=149), posted safety signs (n=124), demonstrations (n=108), and lectures (n=102) leading the list. Goal-setting, feedback, and incentive/reward programs were used frequently, but more companies focused on outcome (“accidents or injuries”) rather than process (“safety-related behaviors or activities”) when setting goals (n=95 vs. 48), giving group feedback (n=83 vs. 60), giving individual feedback in coaching sessions (n=96 vs. 74), or when rewarding people for safety improvement (n=72 vs. 56).

And the absence of checks for many techniques were quite revealing, and inconsistent with appreciation for B-B safety. For example, the most cost-effective behavior-based approaches to improve safety are behavior-based goal-setting and feedback for individuals and groups, yet these intervention approaches were being used at less than half of the sites represented by the intervention respondents. It was encouraging that almost two-thirds of the sample (n=102) use safety steering committees to manage their safety programs.

Principle 3. Monitor Behavior to Improve Intervention Impact.

This principle of B-B safety is critically important. It is the key to continuous improvement. You’re probably familiar with the slogan, “Feedback is the Breakfast of

Champions.” Well that’s what this principle is all about. In order to improve, people need specific feedback regarding the success (or failure) of their efforts.

Even common sense tells us improvement requires knowing what we are doing correctly or incorrectly. Thus, in a B-B observation and feedback process, safety coaches use a checklist to record their observations of safe and at-risk behaviors. Then the safety coach uses the completed checklist to give B-B feedback to the person or group observed. Such data can be readily summarized across individuals or groups per day or week with a “percent safe behavior” metric. This outcome number can be quite diagnostic by showing how a particular intervention program influences different safety-related behaviors, and it can illustrate fluctuations in progress across weeks, months, or years. Such monitoring tells you when to focus an intervention on different behaviors or when to change an intervention approach or protocol.

The traditional safety outcome measures (such as OSHA recordables and lost-time injuries) are reactive and have practically no diagnostic value. Since numerous factors influence the reporting of injuries (including various contingencies that stifle injury reporting), changes in such “bottom-line” outcome numbers provide no useful information regarding the impact of a particular safety intervention. This is certainly not a revolutionary point for *ISHN* readers. Yet our survey results did not reflect this perspective, presumably because knowing that current methods of measuring safety are insufficient is not sufficient for change.

Only 15% (n=24) of the respondents indicated they monitor “percent safe behavior” to assess the success of their safety programs. The traditional outcome metrics were most popular, with 77% (n=125) using OSHA recordables, 75% (n=122) using lost time accidents, 42% (n=68) using total recordable injury rate, and 44% (n=66) using total recordable rate, including illness.

Interestingly, slightly more respondents reported that they use attitude or perception surveys (17%) than percent safe behaviors (15%). Perception surveys are clearly upstream,

proactive indicators of safety progress. However, surveys are not only more expensive than behavioral observations to use on a regular basis, they are also less diagnostic regarding the success of efforts to reduce the causes of injuries.

In Conclusion

The responses of those who completed and returned our B-B safety survey published in *ISHN* reflected appreciation for a B-B approach to injury prevention while also demonstrating significant misunderstanding and misapplication. A majority of respondents, for example, perceived B-B safety as an observation and feedback tool rather than a general approach to improving the human dynamics of safety, relevant for ergonomics, injury investigation, and the design of incentive/reward programs.

Even with substantial appreciation for B-B observation and feedback as a way to increase safe behavior, relatively few respondents indicated use of a relevant metric for monitoring the success of a behavior-improvement process. Thus, while safety leaders are increasing their belief in the power of observation and feedback to improve behavior, companies are apparently slow to apply appropriate feedback measures to evaluate and improve their safety programs. This is likely not due to inconsistencies between people's beliefs and behaviors, but is rather due to management system variables that prevent a paradigm shift from an outcome-based and reactive evaluation process to one focused on up-stream process activities that contribute to the prevention of workplace illnesses and injuries.

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NOTE: Dr. Geller teaches research-based techniques for implementing and evaluating B-B Safety in his latest books, videotapes, audiotapes, and live seminars. For specific information, call Safety Performance Solutions at (540) 951-SAFE (7233).