Behavior-Based Safety Still a Viable Strategy

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Introduction
An article in the December 2002 issue of Safety & Health, asserted that behavior-based safety has run its course and is in decline. A construction worker and trades unionist for many years, I witnessed too many accidents resulting from unsafe behavior. Since then I have spent many years researching and implementing behavioral safety in 12 industries on four continents. I was a Professor of Safety Education at Indiana University, Bloomington who taught behavioral safety at degree level to aspiring safety professionals.

User's respond
I recently conducted an online survey of actual behavioral-safety end-users on the www.behavioral-safety.com website which attracted 247 respondents. Explorations of the freely available results reveal the flaws in Jim Howe's and Ron Millers assertions about the decline of behavioral safety and its effects as described below:

Assertion 1: Less people now attend behavioral-safety seminars and training events
There is no evidence for this. Instead the survey reveals strong growth of behavioral safety in Africa, Asia, Australasia, Europe, Middle East and South America, which is contrary to the notion of decline.

Assertion 2: Behavioral-safety looks at the wrong things
All respondents indicate that safety management system features commonly used in their companies include Orientations, Near miss reporting, Publicity campaigns, Risk Assessments, Safety committees, Safety representatives, Incentives, Safety topic of the month, Safety training and Weekly hazard inspections. Behavioral safety users *also* explicitly focus on safety behavior, and monitor the number of remedial actions completed, observers trained, observations, weekly feedback briefings, near misses reported, the amount of constructive feedback and positive praise given, management's safety leadership behavior, and other miscellaneous items. This wide range of safety activity indicates that companies using behavioral-safety *do* have balanced systems that take into account important issues other than behavior. Hazards, risk assessments, management practices, engineering issues and those conditions and circumstances that can cause injuries and illness are addressed. The survey also reveals that behavioral-safety is used as a complementary safety system, not a wholesale replacement for traditional safety systems as implied in the article.

Assertion 3: Behavioral-safety does not include and unfairly blames workers
The survey reveals that 90% of respondents involve employees in their safety improvement process, which undermines any notion that behavioral safety thwarts workers participation. Also no evidence exists to show there is a higher incidence of workers being unfairly blamed compared to facilities that do not use behavioral safety. Importantly 96.5% of respondents indicated they would prefer to work in a company using behavioral-safety, which strongly suggests that workers are not unfairly blamed.

Assertion 4: Behavioral-safety fails to prioritize the important elements of a quality safety program
As a direct result of the observations, behavioral-safety drives the identification of physical hazards and management system faults as illustrated by the 37 percent of users monitoring remedial actions.

Assertion 5: Behavioral-safety costs too much
The evidence here is mixed. Some consultants do charge high fees. The quoted figure of $300,000 for one facility is very excessive. However, the survey revealed that only 51% of respondents used a consultant. Others developed their own system by employing someone with previous experience, researching the literature, being shown by the corporate safety department or visiting another site implementing behavioral-safety. This shows implementation is often achieved without excessive costs.

Assertion 6: Behavioral-safety leads to under-reporting of accidents
There is absolutely no evidence that behavioral-safety suppresses accident reporting anymore than traditional safety management programs. Under-reporting caused by incentives comes from targeting outcomes (e.g. accident free days) instead of the desired behavior (e.g. reporting hazards and accidents), which is not restricted solely to behavioral-safety processes. In fact, 54% of behavioral-safety users actually encourage and monitor near-miss reporting.

Assertion 7: Behavioral-safety does not produce lasting results
The survey reveals that some systems have been in operation for more than 30 years. If processes are still in place after 30 years, it can be assumed that the process is delivering in some way; else they would have been abandoned! In some instances the impact has been immediate and in others it has taken up to four years to impact on the accident rate, which demonstrates what all providers of behavioral-safety know: It is not a quick fix. It takes time, effort and commitment.

Assertion 8: Those aspects of behavioral safety which reduce injuries is unknown
Researchers and practitioners know that information feedback is the real key to performance. Review after review has demonstrated this fact. All behavioral safety systems build in this element as an integral component. To obtain the information feedback it is necessary to develop checklists that focus on frequent behaviors that *trigger* accidents and monitor them regularly to provide the raw data. This is collated and analyzed regularly and given to people verbally, graphically and in written form at weekly briefings. The survey shows this doesn't happen in 55% of cases, which may explain the failure of some processes. However, rarely do traditional safety programs provide such detailed feedback to people about their own safety performance. Instead, people tend to receive 'after the fact' reactive data about the number of incidents that have occurred in a facility, perhaps on a monthly or quarterly basis.

Overall, the survey evidence does not support the assertions made. Instead it demonstrates the underlying prejudices and biases of those making the assertions, and also shows their complete lack of understanding about behavioral safety, how it works and what can be achieved.

Balancing Act
To facilitate understanding, there are three models of behavioral-safety in circulation:
   [1] Pure behaviorist models that were primarily implemented in the early 1970's - 1980's. This approach largely adopts a supervisory, 'top-down' approach. Supervisors are trained in the method, which they then apply to 'hourly' employees. Often, the sole focus is on giving consequences (reinforcers) such as praise for desired safety performance. Once the reinforcers are removed behavior change does not last. Simple to implement, with minimal training, this is the model that raises legitimate concerns and criticisms from Trades Unions and others;
   [2] The 'employee-led' behaviorist-cognitive model, developed during 1982 – 1997, draws distinctions between cognitive conditions (e.g. Training, Instructions, Goals) to direct people to behave safely and the use of consequences (e.g. Feedback, Praise, Awards, Punishment) to maintain desired behaviors. Although behavioral safety was being done *with* people, not *at* people, the downside was the lack of managerial involvement which impacted on behavioral safety in many ways, not least being open-hostility from some managers. This manifest itself as a lack of commitment to help the process succeed which led to many failures (and still does);
   [3] The absence of managerial involvement and the recognition of management system faults (e.g. a lack of training or equipment) led to the 'Cultural' model (1993 – present) that focuses on the reciprocal interactions between 'Behavior-Cognition-Situations (e.g. Safety Management Systems) based on the work of American

psychologist Albert Bandura. Cultural models <u>explicitly</u> recognize that management systems, management decision-making, plant and equipment, etc., all affect and influence how safely someone behaves. Thus, modern behavioral-safety systems explicitly link the process to the organizations overall safety management system and is based on a management-employee partnership. Used successfully for over 10 years to significantly reduce accident / incident rates it is now being adopted in many regions around the globe.

On the radar
This brief history and description shows that behavioral-safety is continuously evolving as problem areas are identified and researched until solutions are found that maintain its integrity as a proactive data-driven safety improvement process aligned with modern management theory and practice. Based on scientific evidence and numerous case studies such evolution should be applauded, not denigrated as mere re-packaging on a massive scale. Evidence suggests that more lives are saved and the scale of injuries reduced each time behavioral-safety evolves. We take it for granted that other products (e.g. cars, televisions) evolve over time. We do not recommend that later models of these products are abandoned simply because earlier models were not as effective as they could have been.

Moves towards 'cultural' models of behavioral-safety should be welcomed by everyone as they tend to achieve the actual results everyone wants: management and workers partnering to enhance and improve the whole safety management system to everyone's benefit. Recommending that companies abandon a proven methodology which helps to control accident rates and stop people being injured and killed is sheer folly and totally irresponsible. I wonder who will stand up and take responsibility when someone dies as a result?