

Assessing and Improving Your Safety Culture

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Impact of Safety Culture on the Organization

An organization's safety culture reflects the attitudes, beliefs, perceptions, and values that employees share regarding safety. Since the devastating incident at the Chernobyl nuclear plant in 1986, there has been a growing recognition of the importance of an organization's safety culture on safety performance. A "poor" safety culture has been identified as a primary contributing factor in many high-profile incidents occurring since that time, such as the Piper Alpha oil platform explosion in the North Sea and the loss of NASA's space shuttle, Challenger.

Many experts agree that to optimize safety performance we must transition from a "dependent" culture to an "interdependent" one (Tebo, 2002; Geller, 2005). Organizations must leave behind the notion that managing safety primarily involves issuing rules and ensuring compliance through discipline ("dependence"). Instead, the organization's safety culture must promote a sense of shared responsibility for safety through genuine empowerment. The organization must truly value safety and everyone in the organization must feel responsible for others' safety as well as their own ("interdependence"). Further, the culture must encourage individuals to *act* on that feeling of responsibility by taking action to prevent injury to themselves and others (Geller, 2001). Such "Actively Caring" is the cornerstone of a world-class safety culture.

What to Measure

Achieving an ideal safety culture often means moving from top-down control to collaborative involvement, creating an atmosphere of fact-finding rather than fault-finding; and promoting teamwork for safety improvement as opposed to only looking out for yourself. Key measures should include perceptions of management support for safety, peer support for safety, as well as personal responsibility for safety. Further, perceptions of the organization's safety management systems that influence the resulting culture should be measured (e.g., incident & near-miss reporting and analysis process, discipline, rewards & recognition, safety suggestions, communication, training). Each safety management system has an important contribution to make in terms of not only improving workplace safety, but also positively impacting an organization's safety culture. At best, when the system is poorly designed or operating

ineffectively, its ability to affect beneficial change is compromised. At worst, a poorly designed, badly implemented, or ill-functioning system can have a destructive influence on an organization's safety culture. Finally, safety culture assessments should also include measures of senior leadership activities, which set the stage and overall organizational vision for safety.

How to Use the Resulting Data

The results of a safety culture assessment are useful in several ways. First, the results can serve as a diagnostic tool to help identify issues which may be negatively impacting the organization's safety culture and/or which may serve as an obstacle to improvement efforts.

Next, the results can be used as a performance measure to assess the success of safety improvement efforts. Specifically, when implementing safety improvement interventions, care and attention must be paid to employees' perceptions about safety and their opinions about the intervention processes. Otherwise, if behaviors change without subsequent attitude change, the change is likely to be short term and limited in scope. Therefore, repeated assessments can help determine if the interventions are occurring in a way that leads to the attitude change needed for long-term continuous improvement.

Although the most meaningful interpretation of survey results will come from a comparison between results taken at one time with results taken from the same employee group at a later time, comparisons across positions within a single organization and between an organization and a norm (i.e., a group of other similar companies) can suggest targets for improvement or areas where attention and support should be focused.

Examples of Using Assessments to Improve Interventions

Using "should/willing/do" differences to estimate potential for improvement.

An example of how perceptions can be used when developing behavior-change interventions is illustrated by a series of questions often given as part of a site assessment before implementing peer behavior-based safety processes. Three types of questions on our Safety Culture Survey are 1) if they feel employees *should* perform a certain safety-related behavior (e.g., "Employees should caution their coworkers when they are observed working at-risk"), 2) if they are *willing* to perform the behavior (e.g., "I am willing to caution my coworkers about working at-risk"), and 3) if they *do* perform the behavior (e.g., "When I see a coworker working at-risk, I caution him/her"). As shown in Exhibit 1 below, the results of over 150,000 respondents show most people respond favorably to the first two statements, indicating most have the necessary values and intentions. But far fewer respondents agree with the final statement, indicating there are personal and organizational barriers to performing this critical behavior. The possible barriers are numerous (e.g., not my job, I'll get a negative reaction, don't know how to give tactful feedback, don't know the job he's doing so I can't give feedback, people here don't interact with each other in that way).

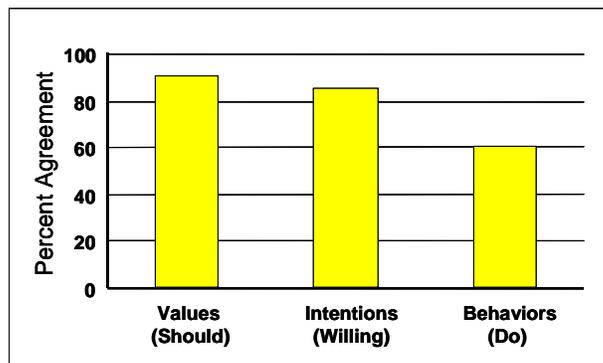


Exhibit 1. Responses vary when asked whether one ‘should’, ‘is willing’, and ‘does’ actively care for others.

However, analogous to Gilbert’s (1978) PIP (performance improvement potential) from his classic text, *Engineering Worthy Performance*, the difference between the “should”, “willing”, and “do” can be used to estimate the potential for improvement as well as to design the most appropriate strategy. When employees feel they should or are willing to perform these behaviors more than they currently do, a potential for relatively quick improvement in safety following basic instructional training exists. However, if employees say they don’t feel they should, they are not willing, and they actually do not perform such behaviors, which thankfully is rare, the intervention strategy should address the reasons for the negative reactions. In other words, the intervention strategy would focus on the rationale such activities are important vs. simply the mechanics of how to do it and the barriers holding us back.

Using perceptions of safety management systems to target their improvement.

Organizations rely on a number of processes and procedures to manage risk and thereby decrease the chance of incidents and injuries. These generally include systems such as safety rules and procedures, safety training, hazard identification and correction, discipline, incident reporting and investigation, safety communications, safety suggestions, and rewards and recognition. Each safety management system has an important contribution to make in terms of not only improving workplace safety, but also influencing an organization’s safety culture. Consider the following example.

Despite a long standing, fairly structured protocol for investigating employee safety and process safety-related incidents, the management team of a chemical manufacturing organization was concerned the investigations were not very effective. In particular, when the incidents involved some form of human behavior the analysis nearly always stopped at identifying the contributing behavior, failing to explain *why* the behavior had occurred.

As part of an overall effort to improve the company’s investigation, an attempt was first made to better understand the employee’s perceptions of the existing investigation process. A sample of employees was asked to complete a questionnaire describing their experience in the reporting and investigation of incidents. The questionnaire focused on three areas. The questionnaire asked their history of participating in incident investigations and also included several items asking their opinion of the investigation process.

The results of the analysis revealed some interesting information. Of all employees surveyed (both hourly and salaried), 60% indicated they would *not* report an incident if they could avoid doing so. Sixty percent suggested they would likely not report an incident because “they or someone else would be blamed”, while 40% feared that discipline would result. Interestingly, company records showed very few instances of the use of the disciplinary procedures.

In examining employees’ opinions of the existing investigation process, the survey responses were separated by position (hourly and salaried) and by whether individuals had or had not been involved in an incident investigation within the previous 12 months.

As illustrated in the graph below (Exhibit 2), the salaried employees responded fairly positive. Most felt the investigations were of a “problem solving” nature as opposed to a “blame” process.

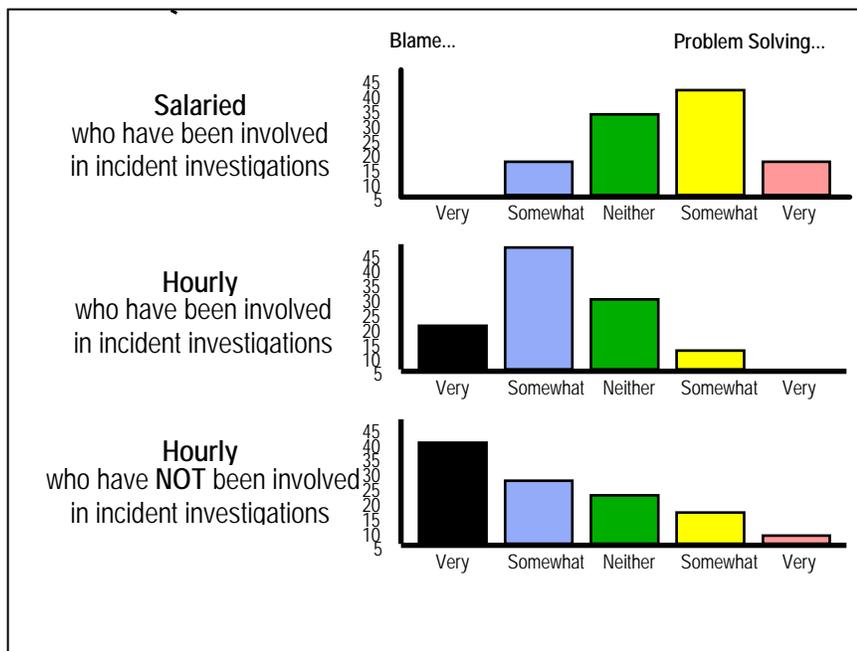


Exhibit 2. Responses varied according to position and experience with the investigation process.

The hourly respondents’ perceptions were not as favorable. Those who *had been involved* in an investigation had somewhat mixed opinions, with some holding fairly strong negative opinions, but most being neutral. On the other hand, those *who had not* recently had the experience of being involved in an investigation rated the investigations quite negatively. Unfortunately however, this group accounted for most of the hourly respondents and is representative of a large majority of the plant population. Although not ideal, it’s apparently not as bad as the rumor mill has it painted. So, although participation in the process enhances most people’s opinion of it, the

pervading opinion is overwhelmingly negative. Follow-up focus groups confirmed these opinions as well as similar results with related questions such as whether the process yielded the “correct findings” or the “wrong findings”.

In this case, the incident analysis process was redesigned to meet two goals: First, to better identify root causes of incidents and to develop effective countermeasures. Second, and equally important, to foster an atmosphere conducive to full and open participation of any employee involved in, witness to, or with pertinent information for any incident on site. New guidelines were developed concerning who was involved in each investigation, better defining the roles and responsibilities, and establishing group norms and ground rules. Also, new analysis tools were introduced to assist the team in understanding human behavior. The process for sharing information, both pre- and post-investigation was revised, and those likely to participate in investigations on a regular basis (e.g., managers/supervisors, safety department members, safety committee members) were provided specialized training.

Assessing Senior Leadership Support for Safety

The Leadership Evaluation and Development for Safety (LEADS) tool measures critical leadership skills and activities related to safety. LEADS components include an assessment of how effectively leaders promote a **vision for safety, engagement in safety, effective rewards, trust, communications, teamwork, and empowerment**. The assessment process typically includes target leaders (e.g., site management team, VPs, CEO) completing the LEADS assessment tool on themselves along with comparison personnel completing the LEADS with the leader(s) as the focus. After a preliminary analysis of the LEADS data, interviews (either telephone or in person) may be conducted with each participant in order to gain additional detail and a rationale for the ratings.

Below are a sample of interview responses from the LEADS categories of **vision for safety** and **engagement in safety** using an organization’s VPs as the target leaders, with operations directors and site managers serving as comparison evaluators. Of particular note is the variability in perceptions of VP safety leadership. In other words, there was not a unified safety culture being set by the leaders at the top of the organization. This transferred down throughout the organization, where some divisions and locations had an exemplary focus on safety while others showed very little support for safety.

The LEADS results were then used to help VPs understand how their actions were being interpreted throughout the organization and direction on how to change their behavior to better support the desired safety culture.

Sample LEADS Comments:

Q2: Leader clearly articulates a vision for the organization’s safety performance.

-Would like to see more emphasis and more explanation regarding the safety vision. The VP has other priorities that take away from clear safety targets.

-Safety is something which plays a role but not a main role when we talk about business. I don’t mean to downgrade the BP, but the main focus on business here is growth, profit, customer satisfaction, etc.

-Every time we have Ops reviews in the plants, health and safety is always a major topic on the agenda. It is clear safety is important to the VP.

Q9. Leader actively participates in safety activities within the sites they oversee.

- The role of the VP is not supposed to work at the site level. VP's may animate site level plans but it is the site managers' role.

- I (VP) participate in discussions, reward people, and ask for examples and suggestions. I give best idea awards and attend workshops focusing on safety.

Q12. Leader participates in HSE celebrations at the site level.

- When sites win HSE awards they are extremely proud because of their commitment to the community and company. However, the VP is never present and rarely offers a letter of recognition. This may be expected due to all the things the division is doing. However, there should be more attention given by the VP to safety celebrations and recognition.

- He does recognize sites for safety – it is strong leadership behavior and is very welcomed by the people – This is a good/important thing he does.

Assessments Should Include Interviews

Based on certain assessment results (such as the Safety Culture Survey) some items or trends may raise more questions than they answer. Structured interviews should be conducted with a representative sample of the population to gain additional details not provided through the assessment tool. In effect, surveys often help reveal 'how/what' employees feel, and interviews can help explain 'why.' For example, when it comes to disciplinary action regarding safety, management and employees are often not "talking the same language" and misunderstandings often occur.

When management speaks of "punishment," they often think of a day off without pay or a letter of reprimand in a personal file, or other standard items in a progressive disciplinary policy. However, employees typically have a much broader definition. Employees often equate discipline with punishment. Therefore, any action the organization takes perceived as unpleasant that happens after an incident will likely be seen as punishment for the incident.

This is reflected in the survey results of a large petrochemical company. Their survey results indicated 0% percent of management agreed with the survey question "*people here are punished for having a work injury*" while about 85% of field employees agreed with the statement. After following up with management to ask why they thought the discrepancy was so large, they were very confused and had no plausible answers why employees would **agree** with such a statement. Then, during follow-up interviews with the field employees, they were asked the same question. They too were confused. They could not see how management could **disagree** with the statement. Then, when asked to give examples of **how** employees were punished, the field employees would give responses such as "*they make us stand up in front of our co-workers and talk about the injury.*" The field employee groups perceived this as a very harsh punishment, whereas the management team perceived this as "positive discipline." As this example highlights, in order to make improvements we first need to know the discrepancies.

Conclusion

We tend to find the hazards we look for. Therefore, we need to make sure we are searching for a comprehensive set of hazards and other barriers to safe performance. Although attitudes, perceptions, and organizational culture are certainly more difficult to measure than physical workplace hazards, this should not prevent us from assessing them. As Deming said “*It’s better to have an imprecise measure of the right thing than a precise measure of the wrong thing.*” Although this quote does not exactly fit, because physical hazards are certainly not the “wrong” thing to measure, indeed they are critical. However, they are incomplete. Because when it comes to influencing our behavior, “perception is reality” and in order to get a broader perspective of the factors preventing optimal safety performance, we should include cultural assessments and employee perceptions as part of a comprehensive approach to hazard identification and injury reduction.

References

- Geller, E. Scott. *People-Based Safety: The Source*. Virginia Beach, VA: Coastal Training Technologies Corporation, 2005.
- Geller, E. Scott. *The Psychology of Safety Handbook*. Boca Raton, FL: CRC Press, 2001.
- Gilbert, T.F. *Human Competence: Engineering Worthy Performance*. New York: McGraw-Hill, 1978.
- Johnson, Dave. “Perception Is Reality.” *ISHN E-NEWS*. Vol. 2, No. 30. October 3, 2003.
- Petersen, D. *Safety Management: A Human Approach*. American Society of Safety Engineers, 2001.
- Tebo, Paul. *Safety, Health, and Environmental Excellence: The Foundation for Business Excellence*. Presented at the Department of Energy Executive Safety Summit, Dec. 4, 2002.
- Wiegmann, Douglas A., Zhang, Hui, von Thaden, Terry, Sharma, Gunjan, and Mitchell, Alyssa. *A Synthesis of Safety Culture and Safety Climate Research*. Technical Report ARL-02-3/FAA-02-2. Savory, IL: Aviation Research Lab, Institute of Aviation, University of Illinois, (2002)