

Behaviour based safety in organizations

Abstract

This paper shall be useful in understanding and application of the concept and process of behavior based safety for safety professionals concerned about correcting unsafe behaviors for reduction of accidents and promoting safe behaviors for developing injury-free culture in their organizations.

Key words: Feedback and steering committee, observation, unsafe and safe behavior

INTRODUCTION

Behavior based safety (BBS) emphasizes that employees need to take an ownership of their safe as well as unsafe behaviors. If they behave unsafe, they are not punished, instead they are repeatedly told to correct; and when they behave safe, they are encouraged. Both unsafe and safe behaviors are counted and displayed. BBS also discusses the unsafe conditions that influence unsafe behaviors.

BBS is a data driven decision-making process. BBS believes that what gets measured gets done and each employee can make a difference in organizational safety. Employees are the basic source of expertise of behavioral change (observe and correct). BBS begins by briefing sessions for all work areas and depts. BBS is a teamwork; it is company wide and people driven. BBS purpose is not to enforce safety rules, force change, gossip about others, reporting to boss. Its purpose is to identify safe and at-risk behaviors, identify possibility for injury, communicating the risk and helping to identify safer solutions. An implementation team or BBS steering committee monitors its progress. Essentially BBS is not a management driven tool for safety. It's an employee driven approach with management support.

HIGHLIGHTS OF BBS

These highlights include different features of BBS, which will help us understanding the concepts and processes involved in BBS. This section is organized in three aspects of BBS as below:

- a. BBS concepts
- b. Observation and feedback process
- c. BBS implementation and steering committee

BBS concepts

1. Actively caring of unsafe and safe behaviors leads to

improved safety behavior.

2. Listening, praising, group problem solving and celebrating safety achievements can increase actively caring behaviors.
3. Attitude and behavior link is weak. What we teach does not necessarily get converted into behavior.
4. Attitude is internal, refers to thinking and realization; whereas behaviour is external, observable and an active experience.
5. BBS addresses individual and social dynamics for safety.
6. BBS does not substitute or replace process evaluation, incident analysis or environmental solutions. When at-risk behaviours are identified, the comments are made on the environmental factors that reduce or prevent such behaviors.
7. BBS effects can be seen by measuring safety climate or awareness before and after its implementation for understanding change in safety performance.
8. BBS finally needs customized approach as per needs of your organization.
9. BBS follows DO-IT: Define, observe, intervene and test.
10. BBS has shown positive results in terms of safe behaviour and reduction in accidents rates across industries and countries.
11. BBS increases safe behaviours and reduces injuries, illnesses and related financial costs.
12. BBS involves a process of observation and feedback, a system of collecting, analyzing and dissemination of data and a proactive approach of management support.
13. BBS is 'actively caring': Its beyond the call of duty for safety for self and others.

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14. BBS is "safety for each other".
 15. BBS is a continuous process till you intend to prevent unsafe behaviors at workplace.
 16. BBS is a peer-to-peer learning of safe behaviours.
 17. BBS is a process of determining progress in reduction of unsafe behaviours.
 18. BBS is more than safety regulations.
 19. BBS is not magic. It's a gradual process.
 20. BBS is not punishment or disciplinary action or focusing on incident rate or personal prejudice or top-down implementation. It's a praise, encouragement and reinforcement of safe behaviors.
 21. BBS is not a top-driven but bottom-up approach.
 22. BBS is one of the best and latest safety approaches that will help you increase safe behaviors and decrease unsafe behaviors in your organization if applied with full commitment of everybody.
 23. BBS is to ultimately develop concern for each other's safety at the workplace and developing empathy for each other.
 24. Behavior is a transaction of person (attitude, personality) and environment (management systems organizational climate). Total safety culture requires attention to these three areas; actively caring improves all these three.
 25. BBS is by the people, of the people and for the people. It is based on the established principles of behavior theory in Psychology.
 26. Principles of BBS are based on research and an established theory.
- Observation and feedback process**
27. BBS is process of repeatedly going to an employee and making random observations till he reaches safe behaviors and learns the concept of self-observation and observing others for safe performance.
 28. BBS is to collect observation data on specific safe and unsafe behaviors by department, date, month and time.
 29. BBS trained observers monitor safety behaviors on regular basis.
 30. Behavior change precedes attitude change. We see tiger, run and then experience emotion of fear. Realization occurs better by doing.
 31. BBS is BOFP i.e., behavior observation and feedback process (BOFP).
 32. Behavioral change brings 'attitudinal change', not necessarily vice-versa, so focus on behavior observation and feedback process.
 33. Critical behaviors can be listed in checklist based on previous accident and injury records and also by brainstorming.
 34. Different observers will notice different safe and unsafe behaviors, which is why employees need to observe each other.
 35. Establish observation routines and continuously improve safety process.
 36. Feedback can be on-the-spot and graphical feedback and also weekly / monthly briefings are given.
 37. Feedback is an interaction based on genuine concern; let us not doubt our own attitude in giving and receiving feedback, it provides insight into our own behaviors.
 38. Feedback is to be given one on one, immediate, specific behavior to be reinforced, appreciate safe behavior to set example.
 39. In Hindi language, BBS is all about dekho and bolo with sensitivity and concern.
 40. Individual name of an employee is not recorded in the BBS checklist.
 41. Observers target observable safe and unsafe behaviors of co-workers.
 42. Observation and coaching may take some time to be accepted by co-workers.
 43. Observation and feedback skills improve with practice and by using checklist.
 44. Observation sampling should be undertaken randomly (not on fixed timings) throughout week.
 45. Observational comments: Wrong tool used, instead say which tool needs to be used and why.
 46. Observe both safe and at-risk behaviours and use detailed comments for problem solving, follow up etc.
 47. Observe in team of two (new observer with veteran observer).
 48. Observers provide feedback on safe and unsafe behaviors to an observee as per completed checklist.
 49. Observers provide immediate feedback for correction of behaviors.
 50. Safety coaching fosters open communication about safety.
 51. Safety coaching serves as constant reminder for workplace safety.
 52. Safety observer / coach in every department may use different critical behaviors (use of PPE, body positioning, use of tools) on checklist and coaching process (problem solving, follow up).
 53. Some characteristics of BBS observer are: concern for others, self-initiation for correcting the observee, developing mutual insight on safe behavior, transforming the observee for self-observation on safe behavior.
- What does a BBS observer gain from actively caring?**
- An actively caring (listening, praising, acceptance) is one of the significant aspects of BBS, one needs to understand what does a BBS observer gain from actively caring? Here are some responses of the BBS training participants:
- Positive safety culture;
 - Increase in production;
 - Job satisfaction;
 - Love and affection;
 - Bonding;
 - Ownership;

- Teamwork;
- Confidence;
- Fearlessness;
- Actively care;
- Feeling to help;
- Joy;
- Openness;
- Decrease in unsafe acts; and
- Positive response

All the above responses clearly indicate that BBS helps in building positive safety culture in an organization.

Some problems in observing and giving feedback

1. Handing over checklist to observee and asking him to do the job;
2. Only observing, not giving feedback;
3. Two observees may not agree with each other;
4. Observer may not allow an observee to speak;
5. Comments column kept blank;
6. Only criticism, not appreciation;
7. Inadequate time for BOFP;
8. Observee behaves smarter, did not accept observer.

Reasons on why a BBS observer may fail in observation and feedback process

- An aggressive way of responding
- Giving feedback in front of others.
- He himself not following SOP.
- Improper communication.
- Incorrect way to pass feedback.
- Lack of cordial relations.
- Lack of knowledge about the job of an observee.
- Lack of patience to correct an observee.
- Lack of responding skills.
- Mentioning person instead of unsafe behavior.
- No proper follow up.
- Personal grudge.
- Superiority complex.
- Unable to convey that we are concerned about injury free culture.

While taking care of the above points, a BBS observer should not formalize too much on the observation and feedback process; he should not dominate. An observer should be flexible and sensitive enough to interact with an observee.

BBS IMPLEMENTATION AND STEERING COMMITTEE

54. BBS Implementation problems include lack of work force buy-in; unsafe behaviors not defined with precision; accident records / near miss injuries not analyzed properly for targeting accident causing behaviors.

55. BBS may start small and build which means that make a beginning in one department. Remember that there is no best approach. BBS can be customized.
56. BBS needs to be integrated as an organizational system. It's a new initiative, new emphasis and new direction on safety.
57. BBS secret of success is that the safety control is in hands of each employee, they feel empowered and responsible.
58. BBS should have pre and post measures of safety awareness levels of employees in all departments through safety awareness survey in order to compare its effects before and after implementation.
59. BBS speed of success depends upon existing injury / accident rate and readiness to implement it.
60. BBS success depends upon a strong steering team, which clearly defines its roles and responsibilities.
61. Behavioral safety management support and leadership of first line and senior managers can be measured quantitatively.
62. Implementation team / steering committee routinely monitor the progress of BBS.
63. In the long run, BBS is cost effective as it reduces accidents, which actually cost huge.
64. Initially BBS can be implemented in one or two departments and then introduce to other departments.
65. It requires a steering committee comprising of a senior manager, a front line manager and about ten of BBS trained safety observers.
66. It's a myth that you need a consultant for BBS.
67. It's an employee movement on behavioral safety with support and commitment of management.
68. Management allows observers time to conduct observation tours, conduct feedback session and organize data analysis to display, without which BBS will fail.
69. People are asked to volunteer to either become observers or be a part of steering team. These people carry out responsibilities / duties.
70. Researches indicate that BBS has reduced 40-75% accident rates within six to one year of its implementation.
71. In India, Essar Power and Tata Chemicals have implemented BBS.

There are some problems in developing checklist and in observing and giving feedback. The participants (N=100) who attended BBS training pointed out some as below:

Some problems in developing BBS checklist [Table 1]

1. Behavior categories not mentioned;
2. Checkpoints not mentioned in behavioral terms such as using, avoiding;
3. Some behavior categories could have been clubbed such as work area and housekeeping, body mechanics and ergonomics;
4. Checklist not appropriately developed, some behavior

Table 1: Observers need a checklist of critical behaviours to guide their observations

Observer _____	Date _____			
Department _____	Time _____			
Behaviour categories	Safe	At risk	Comments	
PPE Using PPE e.g., eye glasses, hearing protection, gloves, hard hat...				
Housekeeping Work area maintained appropriately, e.g. trash and scrap picked up, no spills, walkways unobstructed, materials and tools organized...				
Using tools and equipment Using correct tools for the job, using tools properly and tool in good condition...				
Body positioning / protecting Positioning / protecting body parts, e.g., avoiding line of fire, avoiding pinch points...				
Material handling e.g. body mechanics while lifting, pushing and pulling, use of assist devices...				
Communication Verbal and non-verbal interactions that affects safety...				
Following procedures e.g. obtaining, complying with permits, following SOPs, lockout, tagout procedures...				

categories ignored.

What problems do you foresee when you are going to implement BBS in your organization?

Responses of BBS trainees (N=35) are as under:

- Overstressed: The observer may feel that their workload has increased.
- What will I get? The observer may feel that what he would get in return.
- Whether observee will take in right spirit?
- Fear of workers' buy-in to BBS;
- Taking advantage of BBS - not doing regular work;
- Remove existing unsafe conditions first;
- Integrating BBS with other committees in organization;
- Manpower / extra-time for BBS;
- Huge documentations;
- Interpersonal communication; and
- Launching problem in introducing BBS.

What action plan is desirable in launching BBS

The BBS training participants (N=100) pointed out as below:

1. Commitment from management;
2. Belief that BBS is implementable;
3. Make it known down the level;
4. Form steering committee;
5. Select and train observers;
6. Develop checklists;
7. Selection of areas / depts. for BOFP;
8. Develop timetable;
9. Documentation, analysis and display;
10. Review to determine progress
11. Allocate time for BBS observations and meetings etc.

BBS TRAINING COMPONENTS

Before BBS is launched in organizations, training exposure to all employees is essentially envisaged. Hence BBS training workshop of two days duration should include the following

components or inputs:

- What is behavioral safety?
- Myths of behavior-based safety
- How does behavioral safety work?
- Why all the interest in behavioral safety?
- Outcomes of a behavioral safety project
- Psychology of behavioral safety
- What behavioral safety is NOT?
- Implementation problems in BBS
- Behavioral safety observation and feedback process
- Managers' role in developing behavioral safety culture

Ten expectations of BBS training participants

- We want to be # 01 in accident prevention;
- How do we correct human behavior?
- How behaviour is important in safety?
- How do we change attitude and behavior?
- How do we analyze safe behavior?
- How to implement BBS?
- How to find unsafe behaviour?
- How to make workers understand safety?
- Can safe behavior be measured?
- How to sustain 'safe behavior' is a challenge?

Attitudes and skills for training participants in BBS approach

The following exercises, exposure and discussions would help build attitudes and skills required for BBS approach:

1. How satisfied are you with the level of safety in the job or organization;
2. Accident history of your organization and management interventions on safety;
3. Recall any unsafe behaviors in your work area;
4. Actively going through the workshop reading material for any clarification;
5. Questions and answers session on BBS concepts;
6. Attitude-behavior relationship in the context of BBS;
7. Why a BBS observer may fail in observation and feedback

process;

8. What does a BBS observer gain from actively caring;
9. Characteristics of BBS observer;
10. Problems in observing and giving feedback;
11. Practicum in developing checklist;
12. Practicum in BOFP;
13. Discussion on BBS implementation / steering committee;
14. What problems do participants see in implementing BBS;
15. What actions need to be taken in launching BBS;
16. Form BBS implementation team and develop plan of action;
17. Mutual sharing: Stars and roses exercise;
18. Join BBS yahoo group.

Some responses of BBS training participants (N=350)

- BBS will increase interaction among workers.
- 'It has added to my knowledge as safety professional'- a safety officer.
- We can implement BBS on day-to day basis at workplace.
- Maximum employees must take BBS training.
- Involving all employees shall benefit.
- BBS training makes participants as mini counsellor.
- One-day training for senior manager would help in implementing BBS.

CONCLUSIONS

To reduce accidents, the managements have taken safety interventions such as risk assessment, training, suggestion scheme, training, safety committee, auditing, motivational programmes (quiz, award, incentives), SOPs, plant inspection, work permit system etc. Most of these safety management systems have aimed at controlling unsafe conditions, whereas 80-95% of accidents are triggered by unsafe acts or behaviors. People behave unsafe because it saves their time and effort (taking short cuts or not using PPE). Environmental solutions don't work as effectively as people may remove guards and work in bad housekeeping. Punishment may lead to positive or negative effects. Attitude change does not help much, as it does not really convert into behavior. So BBS can be tried for better safety results. BBS is based on stimulus response (S-R) theory which assumes that unsafe behavior to be changed and safe behavior to be reinforced require repeated external stimuli which is provided through BOFP.

BBS underlines that take active responsibility for safety of each other. Target observable behaviour, focus on positive consequence we expect to receive i.e., change unsafe to safe behaviour; monitor behavioral trends of each individual or group everyday / week / month in order to understand percentage of safe and at-risk behaviors across departments during the years.

In case, PPE are not being used by 50-60 percent of employees, it's an unsafe behaviour; but it's also a system failure, as it does not take action against violation of non-use of PPE. Total safety culture encompasses that safety mechanisms are in place and active and then implementing BBS gives wonderful results. According to a senior safety professional, "punishment never works for sustainable results for safety in organizations". Another safety professional added, "BBS is going to be one of the best components of safety in the years to come". According to another senior safety professional, "you may have operational controls at the workplace; you may have told employees for safety, human beings still meet with accidents due to unsafe behaviors". BBS believes that psychological change can be achieved with repeated and active care of each other. BBS emphasizes that when 80-90% of accidents and injuries are due to unsafe behaviors; let us focus on unsafe as well as safe behaviors more than the unsafe conditions. Behavior is objective, definable, observable, correctable and measurable.

BBS approach needs a visible presence and a clear management adoption and open communication down the line for its launch with full breath, failing which it is difficult to succeed.

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