Quantitative research in health, safety, and environment

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Abstract

In this article, quantitative research in the health, safety, and environmental (HSE) field will be discussed. The primary quantitative tool utilized is the safety committee. With the safety committee, direct communication lines with management on issues in the field can be achieved. Quantitative research provides the ability to understand other people's safety needs or perceptions (Austin & Sutton, 2014). It allows an organization to become a safety-first culture. In order to achieve this type of culture the organization needs to be aware of needed enhancements. This is why quantitative safety research is vital to an organization. This paper will discuss the methods utilized for quantitative research, and how the effectiveness is measured in that research. M&G's safety committee will be utilized to reflect other quantitative tools. This includes Stop Work Authority (SWA), Core Values policy, and regular HSE meetings. This paper will also inform the reader on the importance of quantitative research to enhance any organizational programs.

Quantitative Research in Health, Safety, and Environment (HSE)

A vital primary tool utilized in the health, safety, and environmental (HSE) field is the safety committee. The committee is required to provide input on incidents, recommendations, and better practices to enhance the overall organization (Kellerman, 2012). A safety committee is one way that management and frontline employees can disseminate & share knowledge & opinions. This sharing of information can be vital as there are different levels

of insight from the employees on this committee. By having different levels of insight, an organization is able to grow and expand. The safety committee is also utilized in workplace inspections to provide insight as well as to increase production levels. A supervisor is may be busy supervising employees and production levels which could compromise safety. With a designated committee performing safety inspections, it allows the supervisors to fully perform tasks safely.

A safety committee is also paramount as another tool for quantitative research. Quantitative research is a systematic process that examines relationships and interactions (Burns & Grove, 2005). In order to be more proactive towards accident prevention, an organization should work towards becoming a safety-first culture. In becoming a safety-first company, an organization should initially understand the needs of the employees. This can be accomplished by utilizing questionnaires. Every safety committee member is given a questionnaire at the beginning, middle, and end of the time served on the committee. It is required each member serve a tenue of one year on the committee. So each questionnaire provides a starting point to understand individual views and on-going needs for the organization. Questionnaire results could show other immediate needs of an organization, such as more support from management. It also reveals various best practices to utilize in specific operations that keep people safe, and increase profit margins.

These best practices allow for a much higher successful implementation rate, due to employee buy-in. With safety committee providing quantitative research to the organization, it truly provides direct money-saving tasks to

an organization (Kellerman, 2012). In addition to the safety committee, all employees are issued Stop Work Authority (SWA). A SWA gives any employee the right and obligation to stop any unsafe tasks or condition. As cited in Morrison (2015), if employees utilized SWA every time an issue arises, majority of incidents and fatalities would be eliminated. However, a gap commonly seen in SWA is employees do not utilize it as often due to fear of retribution from the employer (Morrison, 2015). To overcome this issue, M&G Resins has implemented a Core Value policy. M&G Resins is a polymer production plant that is under construction. The Core Value policy defines employee roles and responsibilities, including the safety committee. It outlines that all employees have the right and obligation to utilize a SWA for any individual or group tasks without any retribution. If any retaliation occurs, it should be reported to management immediately.

In order to effectively and efficiently close any gaps involving HSE issues, management holds regularly scheduled meetings with employees. These meetings include weekly, monthly, and quarterly held review meetings with employees. During these meeting with management top HSE issues are presented and discussed with employees. Employees are constantly encouraged to engage in the discussion. With employee's feeling that their insight is needed and approved, the more proactive effects an organization will achieve. This increase in employee involvement also increases employee's morale to work in a safe, healthy, and environmentally friendly workplace.

M&G Resins has greatly improved since implementation of these quantitative research tools. With these quantitative methods of the SWA, Core Value

policy, and regular HSE meetings more employees are freely voicing opinions and reporting incidents. There were zero recordable injuries, zero environmental spills, and only two first-aid cases this year to date. Management has also fully supported and embraced proactive solutions to reduce and eliminate future incidents.

With this quantitative involvement, management is now able to effectively document and understand HSE issues directly via employees. With more proactive employee involvement, the more likelihood the organization’s goals and visions should be achieved. As a matter of fact, one employee’s quantitative feedback allowed M&G to increase production rates by eliminating human involvement and establishing robotics. One production line required employees to physically bag and tie-off the final product. To complete only one order could take up to four hours. During an HSE meeting this topic was brought up not only for safety reasons, but for production as well. This proactive action of implementing robotics allowed employees to perform other critical tasks, while the robotics completed this one lengthy task.

In my opinion, as a safety professional, quantitative research is a required necessity to improve any organization. The future use of quantitative research is solidified in the M&G organization as well as in the HSE field. Without quantitative research employers and safety professionals would not be able to be as proactive in their programs. The future of quantitative research should include researching newer technologies. The newer generations are becoming more tech-savvy, and this may be an opportunity to get in-touch with a bigger audience. The more input an organization can

receive, the greater the potential for the organization to succeed. Management needs to grasp this opportunity to support the employees and customers in order to enhance the organization.

However, a roadblock with many safety professionals is the ability to convince upper management that quantitative research is vital in supporting production operations. It is my opinion, that at times, management disregards safety at employee's detriment and well-being. It is only when a tragedy happens, that management will then seek out safety. A good safety professional must find common ground for proving to management that quantitative research and production go hand-in-hand. Before tragedies occur, it is my opinion, that implementing a quantitative safety program can be an asset for any organization. Any organization, including M&G, would do well in finding a balance between implementing quantitative safety and production. When all levels of management and employees equally understand that no safety will be sacrificed for production, it is then that the company's goals will be achieved.

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