

The Contribution of Focus Groups in Evaluation of Hearing Conservation Program (HCP) Effectiveness

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My talk today will focus on: (1) the context of a larger research study, (2) focus groups as a research and evaluation tool, and (3) how we use focus groups in this ongoing study at NIOSH. I would like to recognize the researchers, including my coauthors on this paper, Michael Colligan and Raymond Sinclair. I would also like to mention B.J. Bishoff, who conducted the focus groups.

The purpose of our study is to identify factors associated with effective hearing conservation program practices and also to develop indicators to measure effectiveness. Briefly, the study includes three noise exposed groups whose data will be compared to other low noise exposed reference populations. We are trying to identify audiometric data sources that have a large number of low noise exposed employees to do the comparison.

In general, the study systematically evaluates each component of a hearing conservation program using data collected according to the OSHA Hearing Conservation Amendment to the Noise Standard. A checklist scores programs as proactive or compliant. I will discuss this checklist later and how we use this in the study with focus groups.

We collect data from multiple sources from company records including noise exposure, audiometric data, according to company policy/procedures, training programs, and management practices. We also are collecting training materials, doing one-on-one interviews with trainers using an evaluation checklist, and conducting focus groups.

Formal surveys can be used as well as employees. People often wonder why formal surveys are not the only tool used for evaluation. Most people want to put a survey in the mail and get employee feedback. This quote sums up why qualitative research is important.

“Quantitative measurements are quantitatively accurate; qualitative evaluations are always subject to the errors of human judgements. Yet it would seem far more worthwhile to make a shrewd guess regarding that which is essential than to accurately measure that which is likely to prove quite irrelevant.”

LaPiere, 1934

Focus Groups

Focus groups are an accepted method for collecting qualitative data. They are appropriate when assessing needs or professions or evaluating programs. They have the advantage of providing data through a social interaction. Thus the data have higher validity than survey methods. The focus group moderator guides the discussion and probes participants when answers are not clear and need to be amplified. The moderator fine tunes the collection of data as it occurs. This flexibility helps to insure the quality of the data. Focus groups, further, are faster and less expensive than surveys. However, the drawback is that they provide less generalizable data in comparison to survey data. Usually no statistical tests are conducted and samples are small and not randomized. However, forgoing the representativeness of the data, focus groups provide a rich cultural understanding about the workplace that is not accessible by quantitative means.

In this study, focus groups are employee centered and attempt to explain the effectiveness of training efforts from the workers' perspective. Issues covered include the workers' perception of the company commitment to the worker hearing conservation program. The managerial practices that contribute to these perceptions are explored. The extent to which hearing conservation training themes are transferred to and reinforced in the workplace are assessed. The

workers' feelings about the strengths and weaknesses of the hearing conservation program are also elicited. I am not going to discuss how focus groups have been recruited for this particular study. We plan four focus groups per company with about 10-12 participants per group. Two of the groups will include first line supervisors and two groups will be composed of hourly employees. Workers represent a variety of job classifications to characterize historical changes in the nature and quality of hearing conservation programs at each site. Only employees who have been enrolled in the program for ten years or more can participate. Every effort has been employed to have a demographic profile and department distribution of recruited workers similar to the plant population. The focus groups are conducted by a trained moderator. The moderator is kept blind to the hearing conservation details about the program. Meetings take up to two hours and are held off site. Participants are paid \$50 as an incentive to cover travel cost and time.

We start by asking participants what sort of health issues are important to them at their plant. This allows us to get an idea of where hearing health falls in the range of health concerns. It also gives us insight into their baseline awareness of hearing as a health issue.

We are interested in how hearing practices have started over time. We ask participants to tell us how the program started and describe how they were tested. We also ask about hearing protection used in terms of compliance as well as what is taking place with regard to noise monitoring and engineering controls. We typically pick a reference point; something happened in the plant or a time point near to the time when the OSHA standard was implemented. For companies with no formal audiometric testing before the standard was put in place, we try to look at more recent history compared to when the standard started. For other companies, we will have information prior to the standard to compare.

With regard to training and communication, we are interested in their perspective on the types of training they have received. What types of training have they liked in the past? What types of training would they like increased?

We are also trying to get information on perceived barriers that employees have about wearing hearing protection, whether employees understand the current plant policy, and how the employees view the current plant policy as regards enforcing hearing protection. Finally, they are asked about their perception of company commitment to protecting their hearing. Employees are asked, "What does your company do to protect your hearing?"

Program Evaluation

The big question is how we use this information in program evaluation. The short answer is that it is one piece of information we use. Furthermore, it helps in fine tuning some of the other information we collect from the evaluation checklist and from other sources of data. The program evaluation list will be used to categorize each of the three components of the overall program.

In this study, the evaluation checklist and structured interviews are conducted with administrative personnel responsible for the training and other aspects of the training prior to the focus group sessions. The responses provided by the administrators of these programs from these two instruments are compared to data collected during focus groups. This functions as a check for consistency and enhanced insight regarding administration of the program elements from the employees' perspective. The degree to which component and overall program scores differ with and without employee input from focus groups can be examined to check for consistency and components that need special attention. In our analysis, we can then examine how well this correlates to: (1) hearing loss over time, (2) noise exposure over time, and (3) trends in hearing protection utilization.

We have found, thus far, that focus groups (if well conducted) offer some special opportunities. Focus groups conducted in off-site locations provide a more relaxed environment for employees to share their insights on program effectiveness. This setting is also an opportunity to probe informal training on issues that arise during the sessions. For one facility, NIOSH investigators, at the suggestion of the plant safety and health manager, provided a half-hour

training session. It focused on questions that came up during the sessions on hearing health issues.

Use of Focus Group Information

One of the ways that information from focus groups can be used is to generate a list of frequently asked questions. These frequently asked questions can be posted on health and safety bulletin boards, Web sites, and used during individual and group training sessions at the plant. Focus group results can also be disseminated to all employees to increase awareness of hearing health issues and provide other employees, who were not able to participate in the focus groups, the opportunity to provide input. Information obtained from focus groups in combination with a survey allow for more active input in hearing conservation efforts at the plant.

Health and safety managers may use information on employee perception of the effectiveness of current training to develop more innovative training materials to fulfill employee and plant needs. Focus group discussions on the perceived barriers of using hearing protection can provide information for program evaluation follow-up. For example, workers can identify noise sources such as air leaks due to malfunction in equipment or the lack of maintenance. Follow-up investigations can then be conducted to evaluate the feasibility of noise control measures.

Safety issues related to employees being able to hear warning signals when wearing hearing protection may be valuable information for evaluating the hearing protectors that are being provided for employees. As a follow-up measure, the types of protection used by employees can be evaluated to

reduce over or under protection, given an employee's hearing status. Moreover, quality of the employee and safety personnel communication can be assessed in the focus groups.

Summary

Focus groups provide a structured, interactive, and relaxed atmosphere for discussion of a variety of topics regarding hearing loss prevention efforts. The added dimension of respondent interaction and discussion as a check on the generalizability of individual responses during the sessions is a dynamic data gathering technique. Surveys assure us that within defined margins of error we know how the populations respond to the narrow questions they have been asked.

On the other hand, focus groups help to assure us that we are asking the right question. Qualitative data from focus groups are particularly valuable in program evaluation when used with other sources of data. Focus groups, one-on-one interviews, and other qualitative techniques allow us to follow up on answers in a structured way. In addition, similarity of responses across focus groups and consistency of responses with other sources are a reality check for administrators to gauge program effectiveness. Focus groups are useful for gathering information missing from records. This includes company commitment and the corporate safety and health culture. Finally, focus groups can be used by program evaluators to bring in employee ideas for improving the program, which hopefully brings increased employee buy-in and increased commitment to hearing prevention efforts.



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