

Proceedings of An Alternative Method in Risk Investigation and Evaluation: Qualitative Research.

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This research may change your view on the usefulness of qualitative research!

The presentation is part of the bigger project 'TOXTRAINER' for use in SME's (Small and Medium Enterprises) which is a spin-off of the REGETOX-project, a research project of our colleagues of the University of Liège. The TOXTRAINER project is conducted in collaboration of the three Universities Liège, Antwerp and Ghent and sponsored by the Federal Ministry of Labour and the European Social Fund.

Background

Earlier prevention programs and strategies to protect workers from chemical risks often failed because their approach did not take into account the specific needs of the target population. An alternative approach to counter this problem is the use of qualitative research.

There seemed to be a discrepancy in real risk versus the perceived risk. What the individual 'thinks' about chemical risks is not always the same as the 'real' risk. Through this fact it was discovered that the safety behaviour of workers depends on the perception of the risk by the individual. Theoretical knowledge only does not always change the safety behaviour of the worker. Knowing the risk did not automatically produce safe behaviour.

Objectives

To describe a method for the assessment of risk evaluation at the workplace and to examine individual, situational and structural variables that determine the safety behaviour of the individual which we call Qualitative Research.

Methods

What is Qualitative Research? It is an efficient research method for in-depth knowledge of reasons of behaviour, complex problems like evaluation of processes. It is widely used in social sciences like psychological research to describe complex relations between individuals! It is an inductive research method.

What is an inductive research method comparing Qualitative versus Quantitative Research? Facts may lead to thoughts and statements through observation which, through induction, leads to a hypothesis! This is used in Qualitative Research.

Where as the more common quantitative research starts from a hypothesis which is checked by facts and numbers, through deductive analysis, leads to the refining of the hypothesis.

The inductive research method is mainly used more in Qualitative Research where the deductive method is generally more used in quantitative research.

The scientific value of Qualitative Research: a high internal validity (face validity, it comes right out the real life!), poor reliability and problems for reproduction and generalisation for obvious reasons. Observation results always show variation depending on subject and time.

Different types of Qualitative Research: interview (individual or group), focus-groups (with a minimum of 4 groups), participative observation (stand alone group),...

Focus-groups

Focus-groups are interactive group discussions together with maximum 8 individuals around a specific topic! Focussing is needed around this specific topic because open questions are to be used (not to predetermine the participants' minds). They are moderated by an experienced person in this matter and assisted by an observer (who takes notes). Attention has to be given to verbal and non-verbal communication (as people might say what they maybe mean otherwise). For better analysis afterwards the discussion is tape recorded.

The focus-groups are analysed as follows:

- The discussions might be written down chronologically (transcript).
- the audio-recordings can be re-listened for specific details
- through the notes of the observer during the sessions
- and of course using the memory of the moderator and observer

or combination of all those elements.

This data can be ordered chronologically, by theme or importance and finally compared transversally with other discussion sessions.

Focus group discussions are used to understand the specific needs on chemical risk evaluation of workers and co-workers.

This methodology involves discussions in small groups of workers and co-workers (5 to 10 persons) on a specific topic, moderated and observed by two skilled researchers.

Analysis of these discussions helps to identify the needs, attributions and perceptions of individuals by describing their specific characteristics of risk evaluation.

Results

Inductive analysis of these focus groups discussions reveals information on variables which were underrated in previous prevention programmes.

I will give you an example of the focus-groups used for the TOXTRAINER Project in SME's. We recruited 5 Belgian companies in the chemical industry and held 6 focus-groups with workers, co-workers and prevention-advisers.

A few of the main results after inductive analysis of the TOXTRAINER focus-groups were: Some general items:

- knowledge of possible risk of chemicals is limited:
 - o long term effects are not known but feared
 - o security labels are not understood

- sensorial information is used as reference (when it smells bad it must be poisonous!)
- Risks were being evaluated by trial and error and through experience of oneself and others.
- There was an acceptance of risk 'on the job':
 - The job has to be done, so we just have to take the risk with it!

Some specific items:

- We saw an influence of the hierarchy:
 - Workers thought that when supervisors get the impression they are working safe this is fair enough!
 - Workers sometimes did not get a clear signal for safe behaviour nor of the right example how to do it!
- We also heard Personal Protection Equipment was not used in routine tasks and they had a blind confidence in Collective Protection Devices so not using their Personal Protection Equipment.
- There was also a difference in gender: women were more concerned about pregnancy and the effect on the unborn child. Comfort and aesthetics of Personal Protection Equipment was also of higher importance to women compared to men.

Conclusions

The qualitative approach provides the researcher with specific information about the variables which are often overseen due to the lack of knowledge of the particular perception-based variables of individuals, leading to determine factors for developing new prevention programmes and strategies, enhancing the success rate!

Thanks

Thanks to the organisers and involved persons of this symposium for giving me the opportunity to give this presentation.

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