

Risk Perception and Unsafe Behaviors in Occupational Health and Safety

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Abstract

In the case study, the reasons of unsafe behaviors of an employee during the activities carried out in a construction site in Istanbul province were investigated. Perceived risk is evaluated by subjective view of expected value based on the importance of the anticipated results. The aim of the study was to change the risk perception and attitude of the employee. It was seen that the employee was distancing from the dangerous behavior model thanks to safe working trainings with based on adult education.

Key words: risk perception, workplace accident, occupational health safety training

Introduction

In the case study conducted, the underlying reasons of consistent unsafe behavior of a worker during the construction of a site located in Istanbul were aimed to be revealed. Following the findings of this study, certain actions were taken in order to change the worker's perception of risk and safe behavior.

1. Risk and perception

There are two common elements in descriptions related to the concept of risk: first among them is "loss" and the latter is that there is either a possibility or an ambiguity related to such loss (Dorofee et al 1996). Risk is defined as not our destiny but merely a choice and the result of our actions based on our courage (Bernstein 1996). Perception is the process, in which the individual organizes the information based on selected stimulants and creates a concept of the world pertaining to this information (Wells and Prensky, 1996: 252). According to another definition, perception is the process of selecting, organizing and interpreting the information brought together by an individual (Kotler 2000).

2. Perception of risk and risky behavior

2.1. Perception of risk

The concept of perceived risk is defined as the subjective evaluation of the expected value of estimated results of each option during a decision making process, based on its level of significance (Conchar et al 2004). According to this definition, the concept of perceived risk is the subjective evaluation of anticipated or potentially emerging loss during the decision making process. The perception of risk might differ from one person to another and even, in some cases, from one situation to another for the same person. Some individuals might take no risks other than acceptable ones whereas some individuals are inclined to take risks that might jeopardize their safety. In studies that examine the concept of perceived risk; risk management and risk control strategies are supplemented by evaluating, determining and examining the mind-sets of individuals on the concept of "danger" and also by improving risk information communication between employees, technical experts and administrators (Orhan, 2000). Studies on "how people perceive risk", "how they decide on taking or avoiding risks" or "whether there is a correlation between the real level of risk and perceived level of risk" are continuing. In studies conducted on this context, experts suggest that individuals are inclined to trust their risk evaluation and personal experience. Being accustomed to qualitative characterization of risk, controlling the risk, possible catastrophic results and level of information are among the factors that contribute to risk perception and possibility of taking the risk.

Important factors that contribute to risk perception are considered as follows (Yavuz 2012).

- Whether the risk is voluntary or involuntary,
- Whether the risk can be controlled,
- Whether the risk is foreseeable,

- Immediate and future results of risk,
- Whether the risky situation has an alternative,
- Type and structure of the risk,
- Benefit of avoiding the risk,
- Appearance of the risk in real life and media,
- Possibility of facing risks individually,
- Recalling past experiences,
- Confidence index against regulatory authorities

2.2. Risky Behavior

According to data released by International Labor Organization, %88 of occupational accidents are caused by risky behavior, 10 are caused by risky nature of work and %2 are caused by are unforeseeable factors. In order to understand the underlying reasons of risky behavior both intentional and unintentional behaviors shall be evaluated. When intentional behaviors are evaluated, most of them are caused by unintentional behavior. In terms of controlling unintentional behavior, following factors shall be evaluated:

Following factors shall be evaluated in terms of controlling uncontrolled risky behavior.

1-Boredom: The employee might not be aware that risky behavior conducted by himself are due to lack of interest and stimulants caused by repetitive work and lack of stimulants.

2-Fatigue: A physically exhausted individual also feels mental fatigue. This might cause the employee to lose concentration and interest in his work.

3-Stress: Researches indicate that psychosocial factors such as stress are an important factor that contributes to occupational accidents. Although individual causes of stress might vary from one person to another, many researchers suggested that most of the factors that contribute to stress in workplaces are common. These are long working hours, heavy workload, overwhelming responsibilities, and problems in employee and manager relationships, ambiguity of roles in the workplace.

4-Lack of Information: Employee's lack of information or wrong information in terms of how to correctly perform his work.

5-Operational Blindness: This might be defined as employee's blindness of possible risks caused by repetitive work conducted by the employee for a very long time.

Intentional behavior which is analyzed as a sub-category of risky behavior is more complex and harder to control. Intentional risky behavior is defined as risky situations in which the employee takes those risks despite being aware of them.

1-Over-confidence: The most prominent cause of intentional risky behavior are caused by over-confidence. Experienced employees continue performing unsafe practices despite their know-how and express that they have not been harmed by this practice despite using it for many years.

2-Gaining Advantage: Being able to meet employer demands, to qualify for salary raises and performance add-ons, completing the work faster etc. (Orhan, 2000).

2.3. Adult Training

Adults are experienced and knowledgeable non-student individuals with professional qualifications. Training process of adults are comprised of various stages including awareness, interest, evaluation, testing, adoption and application. Learning capabilities, utilizing one's personal experience accumulations in the training, proactively participating in the training, positive feedback and protecting one's self confidence are the facts that shall be taken into consideration in the training process of adults.

Method

Qualitative research method has been used in this research. Data used in this research has been accumulated by observed behavior in the working environment of the employee. Qualitative research is one of the information production processes that helps us understand lifestyles, course of action, organizational structure of people and social transformation (Strauss and Corbin, 1990). In this research, it was aimed to measure the subjective perception of the concept of risk in order to understand the underlying reasons behind risky behaviors of employees that jeopardize both themselves and their colleagues. Contrary to quantitative research which utilizes statistical data analysis, qualitative research aims to find an answer to the question of "what kind of meanings people attribute to incidents", in another

saying, “how do they qualify these incidents” (Dey, 1993). Upon in-depth interview of the employee, qualitative data has been accumulated. Qualitative data is defined as any and all kind of information containing subjective perception and opinion of individuals that are obtained using methods such as observation and interviewing (Leech and Onwuegbuzie, 2007). In-depth interview is the method of conducting interviews with specific individuals for a specific purpose. In phenomenological interview method, a sub-category of in-depth interviewing method, researcher aims to understand how individuals attribute a meaning to external reality (Greasley and Ashworth 2007). Hence, qualitative research method does not intend to reduce the research findings to figures and numbers as it is in the quantities research method (Leech and Onwuegbuzie, 2007).

Findings

An accident in which a worker has been injured in the construction site: 25 kilograms of weight maintained for assembly slipped from the hands of two workers working at 17. Floor height on a hanging scaffold used to coat the exterior facade of the building. The weight first fell on a work machine on the construction field and then hit on the head of another worker. First aid application of the victim, who was unconscious and had seizures after the accident, has been conducted by the occupational physician and nurse and the victim has been charged to a hospital by an ambulance that arrived to the accident scene within 15 minutes. Diagnosis performed in the emergency service revealed that there were no serious injuries caused by the concussion and upon suggestion of the respective physician, the patient has been kept under observation for 24 hours in the short stay unit. There were no serious workplace accidents in the construction site resulting with death or loss of limbs, only near misses and simple injuries in the last two years. This workplace accident has been communicated to all workers and workers working on the respective section of the construction site witnessed their colleague taken to the hospital by an ambulance. This accident drew the attention of all employees, due to the fact that it was one of the most significant workplace accidents up until that day on that construction site and it was observed that risky behavior conducted by the workers working on that site significantly reduced after the respective accident has taken place. The incident which is the subject of this case study took place one day after the respective accident. A worker was standing without a helmet in the exact location where his colleague was hit by 25 kilograms of weight falling from a height one day before and he was removed from this area immediately and was reminded that his colleague was alive because he wore a helmet. The worker, who witnessed the accident, standing at the location of the incident without a helmet one day after the accident is not falling in line with safe and secure sense of work. When the worker was asked why he was not wearing a helmet in a dangerous area, he replied that his work to-be-completed in that area takes very short time and he did not see a necessity to wear his helmet. This answer given by the worker made the health and safety officer assume that there is significant incompatibility between the perceived level of risk and exposed (real) level of risk for that employee.

Results, Conclusions and Recommendations

In the training sessions conducted taking into consideration training requirements of adults, the faulty perception of respective employee on him being able to defeat potential risks due to his over-confidence has been changed with the use of supplementary visual and verbal information provided by instructors. Current risk perception of the employee, which was only a possible outcome in the future, has been transformed into a real threat, precautions of which should be implemented right before commencing respective work. By instructing the employees on how risky behavior conducted by employees in their work actions might negatively affect not only themselves but their colleagues and by further explaining the concepts of risk, danger, dangerous situations, dangerous actions, safe work environment and safe work processes; a healthy understanding of risk perception was implemented on employees using proactive learning methods and processes, also making sure that it is the responsibility of all personnel and employees to maintain the safety of both themselves and their colleagues.

Upon the first day and until the very last day of conducting training on the field, circa 3 months, it has been observed that risky behavior exercised by the employee has been significantly reduced. Considering the fact that training is a form of communication, use of active listening methods during the training has contributed significantly to learning and, upon learning, transforming the perception of employees in the latter period. The use of simple, clear and open tone, asking open-ended questions, establishing a training environment supported by positive feedback and taking a non-judgmental, constructive approach in the

face-to-face training sessions has contributed significantly to transform the risk perception of employees in the desired direction.

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