The Attribution Theory Of As a Psycho-Social Approach to the Perception of Occupational Health and Safety: A Focus Group Study Among Women Workers in Metal Industry

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Abstract

Nowadays, women involved in working life with the industrial revolution provide their labor as much as men and are affected by the risk factors in the workplace as much as men. Women are more affected by the psycho-social risk factors because of gender roles and they are also more affect society because of important central role in the family. Psycho-social risks that is one of the occupational health and safety risk factors affect employee attitude and performance to work at least as much as the other risk factors. In this study, researchers aim that reveal awareness's about psychosocial risk factors in their workplace in metal industries in Turkey. In addition, negative attitudes of workers about occupational health and safety practices will be examined with attribution theories in social psychology. In this study, we used qualitative method. Data were collected with focus group study at eight different groups in two different days from woman member of Turkish Metal Union in Bursa city in Turkey. Totally 155 employees participated in the focus groups study. Job satisfaction, job stress, wellness, the relationship with coworkers and managers were evaluated in this study. This study was supported and funded (Project USIP (İ) 2014/7) by the Scientific Research Projects Commission of Uludag University cooperated with Turkish Metal Union. According to the obtained results, work stress emerges as an important psychosocial risk factor. In addition to, stress and lack of communication are important factors causing job dissatisfaction.

Keywords: Occupational Health and Safety, Psychosocial Risks, Women Workers, Metal Industry, Attribution theories.

Introduction

Women, who participated in workforce with the Industrial Revolution, engage today in labor and get affected by workplace risk factors at least as much as men do. They are influenced more by psychosocial risks, which are among the occupational health and safety risk factors, due to their duties arising from gender and cultural practices. In return, they also influence the society more since they form the core of the family.

Psychosocial assessments first appeared in the 1950s. With the rise of working psychology, the effect of psychosocial aspects of working environment on health gained prominence. Psychosocial risk factors affect workers' health through stress to a considerable extent, either explicitly or implicitly (Korkut, 2014:3).

In a guide prepared by the Psychosocial Risk Management Excellence Framework (PRIMA-EF) Consortium created by the World Health Organization for the identification and prevention of psychosocial risk factors, work-related psychosocial risks are handled under ten categories (Leka ve Cox, 2008:2). These risks are: Job Content, Workload and Pace of Work, Work Schedule, Control, Environment and Equipment, Organizational Culture, Interpersonal Relationships at Work, Career Development, Role in the Workplace, Home-Work Interface. In addition to these; stress, violence, bullying and harassment at workplace are also considered psychosocial risks.

Psychosocial threats have a negative impact on workers' physical as well as social health either implicitly or explicitly. The subject threats might lead to workplace stress; and workplace stress, in turn, might result in physical or psychological diseases (Vatansever, 2014:126). Psychosocial risks that workers face reduce their quality of life and as a consequence, both their job satisfaction and work performance are affected negatively (Çakmak et al., 2012:56).

It can be suggested that handling occupational health and safety subject in terms of engineering aspect alone will not suffice. Considering the fact that most occupational accidents stem from human-related factors, such issues as workers' violation of some occupational health and safety rules due to their prejudice or again workers' perception of causes and risks of accidents in different ways can be explained with the help of psychology (Seçer, 2012:32).

According to results of studies by National Safety Council, which carries out significant research in the USA, 18% of occupational accidents occur due to mechanical factors while 19% and 63% of the accidents result from individual reasons and from mechanical and individual factors combined, respectively. According to data from the Department of Labor and Industry of the State of Pennsylvania, 3% of the accidents stem from mechanical factors and 2% from factors related to workers while the remaining 95% are the result of the combination of these two factors (Camkurt, 2013:70).

In Turkey, some research has been done to reveal the reasons for occupational accidents. Of this research, in Haksöz's study (1985) unsafe behaviors and not using personal protective gear were cited as the reasons for 95% of occupational accidents while technical reasons were named as the cause of 5% of the accidents. On the other hand, Çelikkol (1977) indicated production instruments/equipments and unfavorable environmental conditions as the reason for the 20% of the accidents. He named human factor as the cause of the remaining 80%. According to Kepir (1981), on the other hand, 2% of the accidents were beyond human control while 10% were connected to mechanical shortcomings and 88% to human factor. As these findings suggest human factor holds the first place in occupational accidents (Camkurt, 2007:81).

If occupational health and safety is addressed in relation to risk factors, it is seen that psychology is utilized for the assessment of workers' behaviors. Attribution theory, a social psychology theory, offers an understanding of the reasons for occupational accidents (Secer, 2012: 32).

According to Heider, who is regarded as the founder of the attribution theory, there exists a general theory by which individuals explain their behavior. He calls this "naïve psychology". Humans satisfy two needs by means of attribution (ascription): attaining a consistent view of the world and gaining control over their surroundings. The goal of these needs is being able to foresee how people will behave (Kağıtçıbaşı, 2010:248).

As it is also shown in Figure 1 on general attribution process, internal or external stimulus is reorganized by beliefs and structured by cognitions. In the end, the subject cognitions shape behavior.
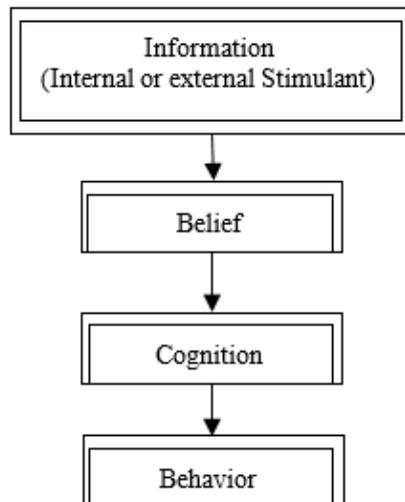

Figure 1: General Attribution Process, Reference: Glendon et al., 2006:86

According to Heider, human attributions are made in two forms namely internal and external. **Internal attribution** is the explanation that assumes the cause of a given behavior is the internal characteristics of an individual. Here, internal characteristics refer completely to personal characteristics such as the personality, attitudes, abilities, efforts, mood of the

individual. **External attribution** is the act of explaining the cause of a given behavior through situations, other people or behaviors which are beyond the control of the individual. For example, other people's behaviors, fate, luck, the circumstances an individual is subject to, the equipment and material used etc. (Kağıtçıbaşı, 2010:248-249). Kelley (1967) analyzed the process of making internal and external attributions in Heider's attribution theory based on details and multiple observations and developed the "Covariation Model". In this model, he indicated that people rely on three main categories for the causes of behaviors or actions when explaining a social occasion. According to this, people seek the causes in the *actor, stimulus* or *in a given situation or circumstance* (Hogg et al., 2014).

Attribution theory is crucial for understanding what the problem stems from in occupational safety practices and for taking more efficient measures. If occupational health and safety is analyzed within the framework of attribution theories, internal and external attributions appear in the causal explanations of occupational accidents. Indeed, if the relevant literature is reviewed, it is noteworthy to see workers usually tend to make external attributions while managers prefer making internal attributions (Secer, 2012:40). Table 1 shows the internal and external factors in workers' causal explanations concerning occupational accidents.

Table 1: External and Internal Factors in Causal Explanations for Job Accidents

External Factors	Internal Factors
Low wages	Lack of qualification
Saving time	Professional arrogance
Excessive workload	Loss of attention
Defective equipment	Abuse
Inadequate training	Lack of comprehension
The pressure of administration	Being a victim
Errors of colleagues	Risky business behavior
Concentration loss	Inexperience
Operational procedures	Carelessness
Incorrect assignment	Flaunt
Bad luck	Do not care
Religionial Belief	Feeling of job security
Poor management	Mood, having a bad day
Difficulty of task and uncertainty	Fatigue and burnout
No suitable equipment	Deliberate neglect

Reference: Gyekye, 2010:408.

In social psychology, studies on how we interpret and explain the events in the world defined three types of errors that affect our attributions and explanations. Attribution is regarded as a rational process. Here, an observer tries to identify the causes of events or behaviors in a rational framework. However, individuals have difficulty maintaining objectivity when evaluating the causality of success or failure, that is, they tend to behave in a biased manner. Behavior occurs as a result of the interaction between individuals' personal characteristics and external factors. Yet, we tend to explain the reasons for a given social behavior on the basis of personal characteristics instead of situational characteristics. This is referred to as *fundamental attribution error* (Kağıtçıbaşı, 2010:255; Gross, 2016; Moran et al, 2014:570).

Another attribution error is observer-actor bias. In this respect, individuals tend to explain their own behaviors through environmental factors while they tend to explain the causes of others' behaviors through those individuals' personalities. Another type of error refers to *errors that are about the self.* These are addressed as self-serving biases. That is individuals tend to assign the cause of their success to internal factors while they attribute their failures to external factors. The bias as a result of which individuals tend to think that others share the same opinion with them is also an attribution error (Kızgın et al., 2012:66; Berry et al. 2015:47).

Material and Method

In this work carried out in cooperation with Uludağ University and Turkish Metal Union (Research Project (BAP-USIP (İ) 2014/7), data were collected by means of focus group research method, a qualitative data collection method. Results from

these data were compared to the results of the data which had previously been collected for a project via survey method, a quantitative method.

Focus group studies refer to a data collection method in which attention should be devoted both to both participants' statements and the social context of the statements in accordance with the instructions set before the procedure and by giving particular importance to the personal subjectivity of participants. Focus group method, in this regard, is a research method that explores the behaviors a set of groups or subgroups engage in consciously, unconsciously or semi-consciously, while also aiming to inquire their psychological and socio-cultural traits and to understand the reasons for their behavior (Çokluk et al., 2011:97-98). Focus group research is a qualitative data collection method that is carried out in accordance with a list of instructions which are set before the procedure. This method requires one to give particular importance to the personal subjectivity of participants and to devote attention to both participants' statements and the social context of these statements. And in doing so, the logic behind the subject method should be given due consideration (Çokluk et al., 2011; 99).

In this method, interviews are conducted by a person who is competent in the research topic, with the help of questioning and summarizing techniques for obtaining information about participants' opinions and experiences. Next, a synthesis is made using the assessments, concerns and opinions which are identified in the analysis of the resultant data (Güzel, 2006:2). Questions used in the interviews are open-ended and allow free interpretation. As to the linguistic style, questions are in the form of conversation and use daily language (Arlı, 2013:175).

The study group consists of female workers who are members of Turkish Metal Union. Total number of female members organized by the Bursa Branch of Turkish Metal Union is 2599. The study used purposive sampling method. Purposive sampling methods have completely evolved as part of the qualitative research method. Purposive sampling allows a thorough investigation of situations that are believed to offer bulk of information (Yıldırım et al., 2006). In this sampling method, criteria that are considered significant are set and the sample is selected in accordance with those criteria. The resultant sample is believed to represent all the properties of the research population (Tavşancıl et al., 2001). Thus, in the current study, purposive sampling method was adopted and focus group interviews were conducted with the study group. Interviewees were selected, with the help of the union representatives, on a voluntary basis from among female workers employed at different enterprises. It was ensured that they came to the recreational facility of the union after working hours so as to attend the interviews. A total of 155 participants were asked questions about their opinions.

An "interview form" was developed by the researchers in order to ask opinions of blue collar female workers in the metal industry regarding their risk awareness on occupational health and safety at workplace. In the preparation of the interview questions, the survey form "risk awareness concerning occupational health and safety", which is also an area of interest of the current research and which was used formerly for a quantitative survey study with female workers at their workplace, was utilized.

In the study, data were obtained through focus group studies which were conducted on two days with groups of 8-10 involving female workers employed in the metal industry in Bursa province and 2 researchers. Data were recorded in written form by interviewers of each group. In the first place, participants were informed about the objective of the study. After they introduced themselves, interviews began. Female workers were asked the following questions:

Do they consider occupational health and safety training offered at their workplaces sufficient?

Do they use protective gear in line with OHS? If so, do the materials really ensure protection?

How do they evaluate their relationship/communication with their colleagues and managers at workplace?

What are the sources of occupational or workplace stress for them?

The interview form consists of open-ended questions. According to Kuş (2009), open-ended questions bring in flexibility to the interview process, allow interviewees more opportunity to talk and help researchers obtain more detailed information.

In the interviews, which were based on questions and answers, the questions were about occupational safety training and practices at workplace, perceived risks of occupational safety, use of personal protective gear and problems associated with them, communication at workplace, work-related stress, mobbing, time pressure and workload.

Results

In the study, each participant's speech was analyzed using the researchers' records from the focus group interviews and the respective codes for each category were defined. At first, it was checked which of these codes was emphasized by a given participant. The study addressed the clearest and most similar statements instead of all the statements by participants. Participants are encoded as P1, P2 and P3.

In the focus group interviews, workers tended to use mainly external attribution factors. It was claimed that the administration provided either no training, which is actually crucial for occupational safety, or little training in order not to disturb the flow of production. Some of the answers to the relevant questions in the focus group interviews are as follows:

Q1. Do you consider occupational health and safety training offered at your workplace sufficient?

P1. *We are aware of the importance of occupational safety, but our company either doesn't offer any training or offers only limited training in order not to hinder the workflow. Therefore, we do not think it is sufficient.*

P2. *Training activities are not frequent. Even more, once we were asked to sign a document stating "I have received training" although we hadn't. I refused to sign and therefore, was asked to write a statement of defense. And so did I. I wrote I did not want to sign any document about a training I hadn't received. After some time, I was called for an interview with the administration and they said I was right.*

P.3. *God saves us from occupational accidents. Otherwise, we do not get any proper training.*

Q.2. Do you use protective gear in line with OHS? If so, do the materials really ensure protection?

Work-appropriate clothes and equipment's are among the primary components of a safe workplace and safe working conditions. As it was the case with the training questions, workers tended to use mainly external attribution factors in their answers to this question, as well. It is emphasized in their responses that work clothes are not attached due importance and are designed completely for a male's body type. They do not believe these materials can provide protection because they think their employees cut corners.

P.1. *Knitted gloves that are given to us are short. Thus, as you can also see, my arms have been burnt.* (The participant rolls up her sleeve and shows the burn mark on her arm).

P.2. *Our shoes are renewed every 6 months and we get the same type of shoes for all seasons. Thus, particularly in summer, our shoes don't let air in and our feet get really uncomfortable.*

P.3. *In the unit I work, we have to wear gloves all the time. Our gloves are renewed once a month, but actually they get punctured in around a week. Even if we demand a new pair in such cases, they do not accept. Although, under normal conditions, I have to wear gloves on both hands, if one is torn, I turn the one on my less-active hand inside-out and use it that way.*

P.4. *We need to use snap-off knives; but, the one they give is too heavy and thick. It doesn't fit in our hands. Therefore, we get more practical snap-off knives for ourselves. In times of inspection, we hide them and work using the ones that we should actually be using. After the inspection is done, we continue to use our own knives; because what they give is not appropriate for our work. It is not possible to finish the product with these knives within the time they expect us to finish.*

P.5. *I had a really bad experience and I can say that it taught me a lesson. Although I have to wear protective glasses, I didn't. I also wear prescription glasses and I didn't want to wear two pairs of glasses at a time. While working, a cable, I don't know how, flew into the air and scratched my eye. Prescription glasses saved my eye. If I had not been wearing them, I would have lost one of my eyes. It was a great lesson for me. Now, I always wear my glasses and warn colleagues who do not wear theirs.*

It is seen that P5 tended to make internal attributions as she had a near miss experience.

Q.3. How do they evaluate their relationship/communication with their colleagues and managers at workplace?

If both the internal and external attribution factors are taken into consideration, we encounter "lack of communication" and as a result, the concept of "stress", which is a psychosocial risk factor and affects workers' performance negatively. Yet,

healthy communication with colleagues and managers at workplace would actually influence workers' job satisfaction and increase their organizational loyalty. According to the study findings, workers were found to lack healthy communication means at workplace and to fail building healthy communication with their senior management. Some of the responses workers provided to the questions on communication are as follows:

P.1. *We have communication problems with our supervisors and senior management. When we express a complaint, we might be assigned harder tasks or our shift might get changed. This is the way we get punished.*

P.2. *There was a problem in the engine when manufacturing fuses. Although our colleague in the manufacture line notified them about this problem, they ignored the warning. And so, our colleague greased the engine and kept on the manufacturing process. Later on, a problem occurred in the engine and 20,000 cars were withdrawn. And our colleague in the manufacture line was held responsible and was punished.*

P.3. *They ignore our warnings and do whatever they want.*

P.4. *Near miss cases are not reported and recorded.*

Q.4. What are the sources of occupational or workplace stress?

Stress emerges as the major psychosocial risk factor that directly affects workers' performance and job satisfaction. In general terms, these are the factors that lead to workplace stress: excessive or insufficient workload, time pressure, monotony, poor working environment, organization of the workplace, career problems, organizational communication issues, conflicting roles, obscure duties, unfairly low payment and mobbing. It is concluded from the statements from the focus group interviews that stress sources center around the "excessive workload, time pressure and mobbing" factors. Workers are expected to finish a duty they are assigned in a shorter time than it is possible. If this decision/expectation is challenged, workers face mobbing. Some of the responses workers provided to the questions on this topic are as follows:

P.1. *We certainly feel time pressure when working. We are expected to work more than we can. For example, they expect us to complete 150 units while the highest possible number that can be achieved is 120 units. I sometimes cannot have a break or I return to work early after lunch breaks as I have to work. Even in this case, it might not be possible to get the entire job done. It reflects on daily life and home. I feel so tense sometimes that I cannot even sleep because of the work-related stress. I wake up unhappy when I have to go to work.*

P.2. *We suffer from time pressure as they use chronometers to measure time. They expect us to reach maximum production scores. They might even question how many times we go to the restroom.*

P.3. *We do not have a full-time occupational safety expert at our workplace. Inspections are done every two or three days. Before the inspectors arrive, we are notified and some improvements are made in the working environment. All this job is also done by the workers. With this job and the production duty combined, we are obliged to work faster and therefore experience excessive stress.*

P4. In her remark reading *"Whenever we express dissatisfaction with something problematic at work or complain the job is tough, they say if we cannot handle it, the way to the exit is over there."* She mentioned both the inadequate occupational safety practices and time pressure and even the stress caused by psychological pressure.

In the attributions, it is seen that participants sometimes make attribution errors. An observer tries to identify the causes of events or behaviors in a rational framework. Individuals have difficulty maintaining objectivity particularly when evaluating the causality of success or failure, that is, they tend to behave in a biased manner. They attribute success to themselves whereas they attribute failures to external factors. Or else, individuals make fundamental attribution errors as they tend to explain the reasons for their behavior on the basis of situational factors while they prefer to explain others' behaviors on the basis of personal characteristics. In the present study, workers attribute their safe behavior to the inspection and pressure by the management while they ascribe any occupational accident that might result from unsafe behavior to fate or to employee negligence/management shortcomings.

Discussion and Conclusion

In conclusion, it is noteworthy that in the focus group interviews with female workers from the metal industry, attributions were based mostly on external factors. In relation to this, they stated that senior management doesn't value human life and

that equipment's are cheap, of low quality and do not meet women's ergonomic needs. According to their statements, they also suffer from such occupational diseases as low back pain, cervical disc hernia and varicose veins and their occupational physicians do not help them. In other words, equipments, insufficient training, lack of communication, excessive stress, that is, external factors are considered to be the causes of any occupational accident that they might experience. Personal reasons for accidents are not mentioned. As to the lack of communication, there is consensus regarding the fact that OHS related problems are the responsibility of their supervisors, chiefs and managers and that employees are not notified of these issues. Findings also suggest that they are subject to pressure by their managers and that most of this pressure comes from female managers, which in a way is a form of psychological harassment. Apart from these, overwork, work load, problems related to the family and home dilemma resulting from gender roles as a woman, lack of confidence in managers emerge as the factors that increase workplace stress.

As can be understood, workers' occupational health and safety culture is still to be promoted and workers have not yet internalized safe behavior. It is worth attention that workers attribute occupational accidents mainly to the unsafe attitudes of employees or management.

Another important point is that the former study which was administered in 23 enterprises (with 2599 participants) using quantitative (survey) method and was conducted as part of this project undertaken in cooperation with Uludağ University and Turkish Metal Union reached contradictory findings. In the former study, which adopted quantitative (survey) method, all the survey questions were distributed in envelopes to the participants at their workplace by the union officers, for which prior permission of the managers was asked. Envelopes were returned the next day. In that survey; safe behaviors, risk awareness regarding the sufficiency of measures to ensure occupational health and safety at workplace, and risk perceptions of female workers were evaluated. In general, female workers emphasized that health and safety measures were taken, their awareness increased, managers provided support with all the equipments to reduce occupational accidents and that they were aware of the threats and risks and if safe behavior was not present, this would mostly be their own faults. In other words, they made internal attributions. It was claimed that particularly in corporate companies, occupational health and safety measures were in line with the ones stipulated by the law no. 6331 and other legal regulations. It was also argued that female workers' risk awareness constituted the basis of safe behavior and that this safety culture was reflected even on home-family lives of female workers (Akalp et al. 2015). In the qualitative (face-to-face/focus group) method, participant female workers came to the recreational facility of the union after working hours and they were asked questions face-to-face in the focus group interviews which were carried out in the form of conversation. As a result of the focus group study, it drew attention that female workers emphasized their managers' indifference, work-related pressure, workload as well as the fact that they worked under stress and any occupational accident to occur would result from insufficient and poor equipment. In other words, they explained their unsafe behavior by making external attributions.

As it is obvious from the above, problems that are inherent in field research have occurred in the present study as well. Participants' responses in the qualitative and quantitative studies differed from each other due to the effect of the environment and face-to-face interaction. This indicates that the setting in which qualitative and quantitative studies are carried out as well as the method adopted for these purposes have an effect on participants' perceptions and responses. In the future, further studies on this topic will need to be undertaken.

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