

# Effects of Occupational Health and Safety Practices on Organizational Commitment, Work Alienation, and Job Performance: Using the PLS-SEM Approach

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## Abstract

Recent occupational accidents urged enterprises to put more importance on occupational health and safety practices. The pressure by both the public authority and the business and social milieu has played an important role in it. The present study investigated occupational health and safety (OHS) practices in five dimensions, i.e. safety procedures and risk management, safety and health rules, first aid support and training, occupational accident prevention, and organizational safety support. A survey form was developed in order to investigate the effect of OHS practices on work alienation, organizational commitment, and job performance as a throughput of such practices. The data set obtained from private sector enterprises was analyzed by structural equation modeling using least squares method. The findings of the analysis suggested that such OHS practices as safety procedures and risk management, safety and health rules, first aid support and training, and organizational safety support had a positive effect on organizational commitment. Moreover, it was seen that safety and health rules and organizational safety support decreased alienation, where first aid support and training played a role in increasing work alienation. Finally, safety procedures and risk management, safety and health rules, and organizational safety support had indirect effects on job performance of the employees.

**Keywords:** occupational health and safety practices, organizational commitment, work alienation, job performance, partial least squares structural equation modeling (PLS-SEM)

## 1. Introduction

Improving employee productivity and occupational health and safety (OHS) have been an important field of interest of industry especially in developing countries. Some common characteristics of such industries include inappropriate workplace design, ill-structured jobs, mismatch between job demands and worker's abilities, adverse environments, poor human-machine system design, and inappropriate management programs. These factors lead to workplace hazards, poor employee health, mechanical hardware injuries, and disabilities, which reduce the worker productivity and work/product quality and increase the cost (Shikdar & Sawaqed, 2003). Identifying the reasons of the high rate of accidents and poor industrial safety track records is crucial in developing countries. The lack of experience from developed countries' technology and machinery is quoted as a cause. According to Takala (2005), the director of the ILO's safe work program, one of the suspects of the high rated incidents is stated the lack of training and skills in developing nations. Most people in these economies have never worked in heavy industry and only some of them have little experience on hazards like electricity (Perez-Floriano & Gonzalez, 2007).

McLain and Jarrell (2007) suggested that the perceived compatibility of safety and production demands has a positive impact on safe work behavior and reduced the interference of safety hazards performing other tasks. This is an additional benefit in case of compatibility with safe working behavior. Therefore, such findings indicated that managers should pay attention to compatibility of safety and work as an integral part of job design.

According to the social exchange theory, workers demonstrate commitment and perform to the extent they believe that they are benefited from organization activities. The perceived organizational support has been defined as “employees’ perception about the degree to which the organization values their contributions and cares about their well-being and employee’s feeling that activities influencing the workers have been voluntarily performed by the organization.” In other words, organizational support is the situation, in which the organization values care the well-being of workers and are characterized by such qualities that increase the happiness of workers. Perceived rather than provided organizational support influence the attitudes of workers towards the work and the enterprise. Therefore, the perception, defined as “the process of reception, organization, and interpretation of information flowing from the environment towards the individual”, should be created in a positive way (Turunç & Çelik, 2010). Organizational support as perceived in line with the principle of reciprocity will ensure that employees work to the benefit of the organization. Acting with a feeling of gratitude, the workers will increase their efforts in favor of the enterprise. Another observation is that the association between perceived organizational support and performance was greater in workers who are in greater need of esteem, approval, and recognition (Rhoades et al., 2001). Accordingly, investments made for health practices based on social exchange theory and the principle of reciprocity result in employee health and well-being, which in turn, conclude with employee attraction and commitment to the organization (Mearns et al., 2010; Huang et al., 2006).

Regarding the opinions of workers and providing them with support as regards the work or out-of-work issues will improve their performance. Individuals may feel that they were not affiliated or that psychological meaning based on work interaction may disappear in case the suggestions and complaints of workers are not listened to or ignored. Such cases may disrupt the organizational support perception and accordingly decrease organizational commitment (Ozdevecioglu, 2003).

Findings of Michael et al. (2005) are consistent with the organizational support theory. In accordance with the said theory, timework employees consider organization’s commitment for safety as a kind of perceived organizational support, and the throughputs of the foregoing is similar to that of the perceived organizational support (POS).

Workers with supportive perception reciprocate this with efficiency and productivity. In other words, such workers internalize organizational values and norms with greater affective commitment, participation, and loyalty (Gyekye & Salminen, 2007). In line with the organizational support theory, “POS may be encouraged by employee’s tendency to ascribe humanlike characteristics to the organization” (Eisenberger et al., 1986 as cited in Rhoades, 2001). “Employees develop global beliefs concerning the extent to which the organization values their contributions and cares about their well-being” in return for their contribution and interest (Makanjee et al., 2006). Therefore, POS can be considered a measure for an organization’s commitment for its workers.

Barling and Hutchinson (2000) found in their study that commitment-based safety practices improved trust and organizational commitment and indirectly and directly influenced the safety climate. Another study by Parker et al. (2001) underscored the importance of organizational commitment in improving the safety performance. In short, organizational interest was shown by acts in support of workplace health and safety. Workplace health and safety is expected to influence organizational commitment (DeJoy et al., 2010).

Wachter and Yorio (2014) suggested that when organizations invested in a safety management system they approached towards improving the performance of accident reduction/prevention and the occupational safety. Such organizations stated that they also cared for winning the hearts and minds of their workers thanks to human performance systems based on safety management in order to develop and improve organizational commitment in workers. As safety performance decreases the accident rate, personnel injuries and material damage decrease and working conditions enhance simultaneously resulting with higher employee motivation and reduced absenteeism. (Fernández-Muniz et al., 2009). Meanwhile absenteeism, defined as habitual or intentional absence of employee’s from work, has a major effect on company strategies. Employers desire certain number of lacking workdays from employees in a time interval since extra absences can decrease productivity (Cucchiella et al., 2014).

Organizational safety support covering all health and safety policies could provide antidotes to the problem of (work alienation) powerlessness experienced by employees. Katou and Budhwar (2010) state that human resources management policies such as health and safety, communication, participation, involvement, and work design can build a pretty and safe working environment combining with the employees who have opportunity in joining decision-making process. This is acknowledged as decreased employee turnover and absenteeism. When organizations do not support their employees sufficiently, this could decrease loyalty and reliability but increase

work alienation (Byrne & Hochwarter, 2008).

Westgaard and Winkel (2011) point out a positive effect of inclusive management practices (such as concern for workers, transparency, dialogue and goal clarity) on health and risk factors. A mixed study also indicates that emphasis on human concerns is related to positive outcome on motivation, communication, and interest in job. Therefore, in correspondence with the literature, the research findings demonstrate that human concern provides employees not to separate their work.

Occupational health and safety systems are generally based on directives published by national and international organizations and institutions (such as BS 8800 NZS 4801 / AS, OHSAS 18001 or ILO-ISO-2001). Occupational Health and Safety Assessment Series (OHSAS) 18001 has become an important standard to assess safety management processes at company level (Granerud & Rocha, 2011).

Abad et al. (2013) suggested that adoption of OHSAS 18001 was strongly explained by objective safety parameters. This indicated that managers should have used the foregoing framework as a mechanism in order to improve safety conditions in the workplace. Important findings of their study included the fact that enterprises that adopted OHSAS 18001 attained significant improvements in safety, performance, and workforce productivity. These empirical data supported that safety-specific information and experience as acquired by companies had been an important source in improving safety conditions and work performance.

Brown (1996) and Pagell et al. (2013) argued that safety should be considered an important operational priority in addition to cost, quality, flexibility, delivery, and innovation. Furthermore, safety is not a priority of a few numbers of big companies but it is a demand of governments and majority of citizens as a basic human right. Workplace safety is an issue of national and international importance. OHS can not be left merely to the responsibility of safety units but should become an activity of the entire organizations. Operation management literature emphasizes workers' safety as an antecedent of operational excellence rather than suggesting that managers should prioritize safety or production.

The above situation encourages us in engrossing the question of the research: What may be the effects of OHS, which is considered an operational priority, although the same is in fact of strategic importance for organizations today, on employee behaviors?

Organizational commitment is still important for managers, scientific researchers, and contemporary institutions (Banai et al., 2004; Morrow, 2011; Neininger et al., 2010). There are two approaches in the literature towards a definition of organizational commitment. First, commitment is understood as the intent of the worker to continue working in the organization. Secondly, organization commitment can be defined as an association between individual and organization and that it is the reflection of the psychological identity of the worker and relative power of participation in the organization (Jaramilo et al., 2005).

Management commitment to safety has a positive relationship with organizational commitment, job satisfaction and job-related performance. Moreover, commitment to safety has also a negative relationship with employee withdrawal behaviors (Michael et al., 2005). Ongoing attendance to safety results in organizational rewards, in turn increase employee motivation. Such positive impress may impact other work attitudes like affective commitment besides raising safety climate (Clarke, 2006).

Similarly, alienation notion has a long history in academic literature. Banai and Reisel (2007) asserted that work alienation was selected as a dependent variable as focused by different disciplines until today. DeHart-Davis and Pandey (2003) suggested that workplace alienation was conceptualized as a general cognitive state of psychological disconnection with work driven by lack of professional autonomy. Moreover, alienation is often seen as an agent of dehumanization since the person becomes an object who merely responds to job rather than seeing job as an accomplishment of self (Sookoo, 2014). The results of work alienation in workplace are less worker commitment, employee dissatisfaction, employee sabotage, absenteeism, employee turnover, less productivity, and aggression amongst employees and groups and employee burnout (Sookoo, 2014). Employers cannot put their employees in jeopardy becoming alienated. So, organizations should pay attention to employees' behaviors and attitudes which influence job performance.

In addition to the variables given above, job performance is a function of personal performance of individuals as regards the tasks included in standard of job descriptions. Work performance is also influenced by such variables as establishing good interpersonal relations, withdrawal behaviors such as absenteeism, substance abuse, and behaviors that increase hazards at workplace (Murphy, 1989). Therefore, it can be said that job performance remains to be an important notion in organizational studies and scientific research.

The present study aims to contribute in literature by defining five dimensions for OHS practices: Safety

Procedures and Risk Management (SPRM), Safety and Health Rules (SAHR), First Aid Support and Training (FAST), Organizational Safety Support (OSS), and Occupational Hazard Prevention (OHP). These dimensions as included in the research model are intended to test the causal relationship between worker commitment, work alienation, and job performance to investigate the effect OHS practices.

## **2. Background**

### *2.1 Occupational Health and Safety Management*

Occupational Health and Safety Management Systems (OHSMS) have been defined by Gallagher (2001) as "...a combination of the planning and review, the management organizational arrangements, the consultative arrangements, and the specific program elements that work together in an integrated way to improve health and safety performance."

Efficient use of communication and information networks in enterprises both helps with reducing number of accidents and improves the perception of workers as regards management's commitment for OHS (Gyekye et al., 2012).

Safety management systems are integrated mechanisms designed to control the risks that may affect worker health and safety in organizations and at the same time to ensure that the company complies with the regulations. A good safety management system should be completely integrated with the company and with binding power; a cohesive system of policies, strategies and procedures provides consistency and harmonization (Fernández-Muniz et al., 2009).

Health and safety policy and procedures are a part of efficient health and safety management framework. General health and safety policies demonstrate the management's willingness to provide the workers with a healthy and safe workplace (Christian et al., 2009).

Risk management is a technique that has been used increasingly in organizations and public sector in order to improve safety and reliability and minimize losses. It includes defining, assessing, and controlling the risks (Cox & Tait, 1998).

Similarly, occupational health safety risk management is also described as a three-phase process. First, the hazards in the workplace are defined. Second, the hazards underlying the risk are assessed. Finally, appropriate controls are put in place for accordingly defined risks (Lingard & Holmes, 2001). Understanding and managing all risks that would likely affect the organization will render better performance and competitive advantage.

A review of occupational accidents and health problems associated with work provides that those experienced accidents at electricity, gas, steam, water, and sewage system fields and those experienced occupational accidents in the construction sector rank the first (TUIK, 2015). Albert and Hallowell (2013) suggested in their study that use of safety-related procedures, following instructions, cutting of power lines, and stopping operation of equipment in an attempt to prevent injuries were a cost-inefficient strategy yet very effective as regards preventing injuries. The findings of the study underscored that the benefit of applying injury prevention strategies were low compared to other sectors (e.g. construction sector). Consequently, investment in safety interventions may not offset economic returns yet creates value as non-monetary benefits (e.g. decreased worker turnovers) and decreases social costs (e.g. social injustice) associated with injuries.

De Koster et al. (2011) demonstrated that focusing on safety helped with reducing accidents. In this context direct costs include first intervention, ambulance and hospital expenses, payments for temporary or permanent incapacity for work or death, pecuniary and non-pecuniary damages payable to the worker or worker's relatives, and damages payable to insurance, where indirect cost items include loss of reputation, long-term efficiency, and legal expenses. In general, companies should invest in practices reducing occupational accidents in order to improve their safety performances. This idea is supported by the fact that such companies that focus on safety in their daily operations and working methods as Scania, Tata Steel, Boston Scientific, and Nissan experience lesser number of accidents and decrease relevant costs.

Operation of safety climate relies on the perception of workers and that safety climate as created by the so-called shared perception of workers is associated with policies, procedures, and practices associated with the value and importance of safety within the organization (Griffin & Neal, 2000).

Zohar (1980) suggested that the most consistent factor that contributed in the safety climate was strong commitment of management for safety. Safety commitment is demonstrated by a series of differences: (a) senior management regularly participates in safety activities, (b) safety officer holds higher rank and status in the organization, (c) safety training is emphasized, (d) open communication and close contact between management

and workers, (e) stable workforce (e.g. less turnovers), and (f) promotion of safety via guidance and counseling rather than via coercion and admonition etc. However, the essence of conceptualization of safety climate in an institution is the fact that safety is a prioritized issue for enterprises. Managerial support for safety and importance of safety in the organization are considered the basis of safety climate.

Kabanoff et al. (1995) defined the criterion of beliefs as regards what was important for individuals and the entire organization. Perception of organizational values is important since it influences the way workers interpret policies, procedures, and practices. According to Griffin and Neal (2000), for instance, safety climate perception was the extent the workers believe in the value of their safety and wellbeing in the organization.

Consideration is the degree to which a leader shows concern and respect for followers, looks out for their welfare, and expresses appreciation and support (Bass, 1990). Chiaburu et al. (2014) defined that individual consideration was found to share a negative relationship with alienation.

## 2.2 Work Alienation

Xue et al. (2014) asserted that the history of alienation term could be traced back to early teleological writings. There alienation was defined as a state of separation from God. Subsequently, Hegel redefined the concept from a philosophical point of view. Hegel suggested that alienation was an unsolicited yet conscious experience of separation among social beings or intentional submission of personal interests. Work alienation is in general a psychological state of separation of one's own image and social relations inside and outside work environment (Banai & Reisel, 2007). Work alienation is a conscious sense of separation from work and work environment and reflects the deficiency of organizational identity (Armstrong & Stassen, 2006). Alienation can be defined as recurring indecisiveness of individuals due to lack of time and accurate information and thus it may result in a loss of sense of ownership over one's perspective about his wellbeing and future. Such inappropriate working conditions as indecisiveness, ill working group, high business demands, and low work control may distance workers from work. This might result in early departure from occupation and lower employability (Camerino et al., 2005).

In many scientific studies as regards the organization, alienation has been a curious issue (Podsakoff et al., 1986; Michaels et al., 1988; Goldsmith et al., 1996; Banai et al., 2004; Banai & Reisel, 2007; Ganesh & Joseph, 2011; Chiaburu et al., 2014; Xue et al., 2014; Sulu et al., 2010; Tummers & Dulk, 2013). Researchers mostly emphasized a negative relationship between alienation and performance output, such as job performance and citizenship behaviors. In contrast, there has been reported a positive relationship in theoretical and empirical terms as regards absenteeism and health problems (Chiaburu et al., 2014).

Studies found negative relationships between alienation and job performance since alienation was characterized by a phenomenon which deteriorated sense of self, attitudes of workers, business goal, and social networks (Banai & Reisel, 2007).

Increased organizational support provides workers with cognitive, emotional, and physical opportunities, which is expected to decrease alienation. Finally, personal behaviors including working performance may be affected when individuals are alienated. Alienated workers are displeased with the work and it is more likely that they would complain or intentionally avoid or evade from work (Chiaburu et al., 2014).

## 2.3 Organizational Commitment

Organizational commitment has been intensively covered in management studies. It is related to organizational citizenship behavior as well as to such work aversion behaviors as absenteeism, intention to leave work, and worker (Banai et al., 2004).

Organizational commitment has preoccupied scientific researchers for many years. Similarly, practitioners have shown close interest in organizational commitment due to its results as increased endeavor, higher job satisfaction, less absenteeism, and more worker employment in the organization (Morrow, 2011).

Organizational commitment is separated into three components of affective, continuance, and normative commitment, respectively. In Meyer and Allen's model affective commitment represents the degree to which a worker identifies with, is involved in, and enjoys membership in an organization. Workers with high affective commitment continue working because they desire to stay in the organization. Continuance commitment a worker's conscience as regards what it would cost that worker to leave the organization. Individuals, whose organizational commitment is characterized by continuance, tend to stay in the organization due to their needs. Normative commitment involves a feeling of moral obligation of workers to continue working for the organization. Workers with high normative commitment continue working for the organization not because they desire it but because they find it moral (Meyer & Allen, 1991).

As underscored in a study by Eisenberger et al. (1990) the workers' perception as regards being valued and regarded by the organization positively influence the degree the workers act sincerely in fulfilling their responsibilities, affective and continuance commitment, and being open to novelties on behalf of the organization. A high level of affective commitment is desired in all organizations since it is associated with high individual productivity (Michael et al., 2005).

Workers' organizational commitment is a priority for contemporary organizations. Organizational commitment of high performance workers especially at times of crises and business interruptions leads to competitive advantage. Organizations that fail in creating organizational commitment would decrease the sources for future competition (Neininger et al., 2010). Numerous studies have analyzed the high-commitment management model, high performance work systems or the organizational commitment to employees (OCE) model in the strategic human resource management literature. These terms are used to depict a system of human resource practices that enhance employees' skills and knowledge, their commitment, and consequently, their labor productivity, thereby these turn into a source of competitive advantage (Roca-Puig et al., 2012).

It is evident that controlling hazardous situations, appropriate physical working conditions, rewarding and recognition, development of friendship and companion, and workers' fitness in jobs collectively create an efficient and competent working environment. Organizations should design working environments so as to increase the level of organizational commitment and motivation, and improve throughputs (Danish et al., 2013).

Tools as applied in the management of working environment with an intent to increase productivity include noise control, waste and hazard control, improving friendship, creating a more human environmental milieu, worker's fitness in job, rewards, feedback, modeling appropriate working environment, increasing the quality of business life, and creating appropriate physical working conditions (Taiwo, 2010).

May and Schwoerer (1994) also point out that if additional help and more resources are given in simplifying work processes and doing their job better, the teams who are highly committed to their work can able to improve their job performance.

Environmental conditions should be supportive so as the workers become safety sensitive. Thus endeavors that motivate workers and influence beliefs and attitudes should be supported. This can be resolved in case the management shows a clear and compelling interest in the wellbeing and safety of workers, which can be attained by appropriate work equipment, job enrichment programs, skill development, visiting workplaces to warn workers, and clear demonstration that management cares for the safety of workers (Gyekye & Salminen, 2007).

The reason is that perceptions of the work environment impact worker attitudes and so a well-designed job can impact positive psychological conditions (Banai & Reisel, 2007), which would-predictably-lesser alienation (i.e., Allen & LaFollette, 1977). In the light of the findings of aforementioned studies it can be said that occupational hazard prevention (OHP) positively influences organizational commitment, and negatively influences alienation.

DeJoy et al. (2010) suggested that studies on exchange relations within organizations generally focused on social exchange theory (exchange relationship theory). Basically, the perspective of social exchange theory (Blau, 1964) is that a person provides service for others in expectation of a positive return in the future. If we project the foregoing logic to workplace safety, the workers will show better efforts to comply with occupational safety and follow other recommendations as regards safety, in case the managers and supervisors demonstrate their commitment and support in safety. Here managerial support is a necessary condition, which creates a positive psychological environment that elevates safety expectations and motivates good safety behavior.

Taking into consideration the research in literature, it can be said that organizational safety support (OSS) is negatively associated with alienation. An enterprise with good working climate may increase the potential of workers to higher levels. In contrast, workers' motivation may decrease in enterprises with inappropriate working climate (Wu et al., 2008).

In interaction with their subordinates, managers may share valuable information or keep it to themselves, or prefer to reveal the same via mentorship and socio-affective interaction. Similarly, subordinates render services that are considered valuable by managers and demonstrate organizational commitment by self-devotion to the goals of managers with extra efforts (Golden & Veiga, 2008).

HR practices are composed of employee learning and development, workers' involvement and participation, business-life balance practices, and workplace health and safety. As suggested by Yeh (2014), job satisfaction and organizational commitment are directly associated with HR practices.

Workers' organizational commitment is an important indication of their effect on the performance of the company. The primary reason of it is the fact that workers with organizational commitment tend to work for

extended time periods in the same organization. In addition, such workers are more active in their own job performance. Organizational commitment is also associated with how workers would attain goals of organization and corporate identity, and organizational loyalty (Yeh, 2014).

Job stress and physical workload may disrupt the ability of personnel to prevent hazards at workplace and may give a rise to risk perception. Furthermore, a combination of those factors may lead to risky behaviors and accidents (Rundmo et al., 1998).

Michael et al. (2005) suggested that there were evidence as regards the fact that an organization would benefit in case management was determined to provide workers with a safe working environment and maintain it. This determination can be demonstrated through various ways; e.g. personal care for health and safety of workers, implementation of workplace safety training programs, participation of occupational safety committees in management, considering safety in work design, and reviewing work rate. Shift working disrupts “sleep-wake” cycle. Sleepiness and tiredness lead to low performance as regards work health and safety (Dorrian et al., 2011). These kinds of ill-designed working systems are abundant in industries. Negligence of ergonomic principles may lead to manpower unproductiveness and accidents. An ergonomically inadequate enterprise may result in physical and emotional stress, low productivity, and poor quality work outputs (Shikdar & Sawaqed, 2003).

Studies suggested that workers with a negative safety climate perception (e.g., high workload, job pressure) were akin to attempt unsafe acts, which in turn increased susceptibility of workers to accidents. Similarly, workers with anxiety and stress, due to unsafe work, tended to have lower safety motivation and adaptation, inflicting a higher rate of accidents. Furthermore, workers with a positive perception for their work place safety inflicted lesser accidents.

Strong commitment of organizations for workplace safety allows an increase in desired worker behaviors and attitudes as well as a decrease in problems associated with occupational safety (Michael et al., 2005).

Organizational behavior is directly associated with the organizational safety climate perception of the workers, which positively influences safe working behaviors of workers and decreases the frequency of accidents, in respective order. Such improvements also support general wellbeing and motivation of the workers. This job satisfaction has become to be addressed in a technical way in literature (Gyekye, 2005). Health and Safety Rules (SAHR) can be said to be associated with organizational commitment and alienation of workers.

#### *2.4 Job Performance*

One of the major problems of manufacture companies is focusing on improving worker productivity as a measure of job performance. Some shared characteristics of such companies include high workloads, adverse environment, ill-designed human-machine systems, and unpleasant working conditions etc. High workloads and such workplace conditions as excessive hot/cold, chemical smell, noise, bad lighting, vibration, and dust have direct and indirect influence in job performance of workers. Such conditions decrease the worker concentration towards duties, lead to lower worker performance such as low productivity, poor quality, and physical and emotional stress, and results in high costs (Kahya, 2007). Individuals working in a healthy work environment believe that their demands related with job are not excessive and that they do not have to sacrifice their family lives or other meaningful non work roles in order to perform well on their jobs (Kossek et al., 2012). They have positive psychological feelings with their jobs and perceive positive transmission and crossover of energy, emotion, and skills between work and their family. It is believed that they are valued at work and their jobs are a good fit with their abilities and interests (Kossek et al., 2012).

Organizational commitment may potentially affect the performance of the entire organization. Therefore, commitment is a quality that is strongly desired by organizations and that encourages the workers. Even though the studies do not suggest coherent findings as regards whether performance is a result of organizational commitment, it would not be wrong to assert that commitment is a determinant of high performance based on the fact that having positive work attitudes would render positive work outputs (Camilleri, 2002; Sıgır, 2007).

Past studies defined three dimensions of organizational commitment: affective commitment, normative commitment, and continuance commitment. Studies suggested that all three dimensions were negatively associated with worker turnover and had significant positive relation with other attitudes towards work at varying levels (Meyer et al., 2002). Therefore, widespread adoption of OHS practices in enterprises will positively influence the organizational commitment of the workers.

First aid training in the scope of OHS is quite necessary in order to control the excessive self-confidence, i.e. the unrealistic “nothing happens to me” idea, and raise awareness as regards emergent situations. First aid training ensures that participants are protected against injuries and occupational diseases. Participants show better efforts

for decreasing the risks are workplace subsequent to the first aid training. It can be said that the first aid training improves the motivation of participants in order to prevent occupational hazards and diseases. However, it should be noted that the degree of change towards positive behaviors due to the foregoing increased motivation is also dependent upon other organizational factors. A good rewarding mechanism is also required in order to establish occupational health and safety in the working environment (Lingard, 2002). Therefore, it can be said that first aid support and training (FAST) is associated with alienation and organizational commitment.

### 3. Research Model and Hypotheses

A theoretical research framework was proposed for the purpose of the present study. The research model is provided in Figure 1. According to the above given explanations, we expect occupational health and safety practices such as occupational hazards prevention, safety procedures and risk management, organizational safety support, first aid support and training, safety and health rules, negatively affect work alienation and positively affect organizational commitment. In addition, safety procedures and risk management, safety and health rules, and organizational safety support affect job performance of the employees.

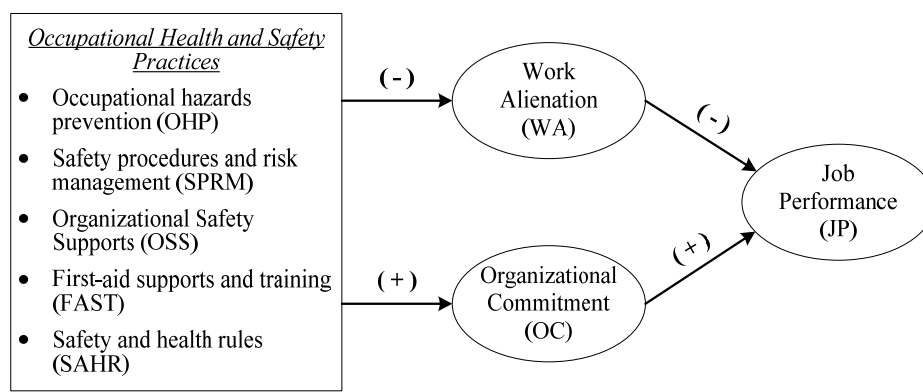


Figure 1. Proposed theoretical research model

Consistent with the literature review and argumentations, the following hypotheses were proposed. As expected a negative influence of occupational health and safety practices on work alienation, we consequently hypothesized:

H<sub>1</sub>: Occupational hazard prevention negatively affects to work alienation.

H<sub>2</sub>: Safety procedures and risk management negatively affect to work alienation.

H<sub>3</sub>: Organizational safety supports negatively affect to work alienation.

H<sub>4</sub>: First-aid supports and trainings negatively affect to work alienation.

H<sub>5</sub>: Safety and health rules negatively affect to work alienation.

On the other hand, we expected positive influence of occupational health and safety practices on organizational commitment. Consequently, we hypothesized:

H<sub>6</sub>: Occupational hazards prevention positively affects to organizational commitment.

H<sub>7</sub>: Safety procedures and risk management positively affect to organizational commitment.

H<sub>8</sub>: Organizational safety supports positively affect to organizational commitment.

H<sub>9</sub>: First-aid supports and trainings positively affect to organizational commitment.

H<sub>10</sub>: Safety and health rules positively affect to organizational commitment.

Furthermore, we expected positive influences of occupational health and safety practices and organizational commitment on job performance while work alienation was expected to influence job performance negatively. Consequently, we hypothesized:

H<sub>11</sub>: Work alienation negatively affects to job performance.

H<sub>12</sub>: Organizational commitment positively affects to job performance.



H<sub>13</sub>: Safety procedures and risk management positively affect to job performance.

H<sub>14</sub>: Safety and health rules positively affect to job performance.

H<sub>15</sub>: Organizational safety supports positively affect to job performance.

#### 4. Methodology

The present article provides the impact analysis of OHS practices in different public and private sector companies in Turkey. The research also investigated the workers' organizational commitment, alienation, and job performance levels in association with OHS practices. First, the sample and scales were reviewed below. Then the model as created in the light of the data from samples was analyzed. In this scope, first confirmatory factor analysis was made for each variable and then the model was tested as a whole for goodness of fit via PLS (Partial Least Squares) based structural equation modeling.

##### 4.1 Sample

The study population was comprised of small and medium scale production and services sector workers operating in Kocaeli. The survey was conducted by voluntary participation of white-collared employees who have a global perspective, are easily accessible and better represent their organizational facts. 439 out of 500 questionnaires were returned, but 50 questionnaires were excluded due to several problems. Hair's (2010) approach was adopted in the selection process. Finally, the study was conducted upon the analysis of questionnaire data replies by a total of 389 employees.

##### 4.2 Measures

The questionnaire form included a total of 43 items composed of 26 items intended for measuring occupational health and safety practices, 8 for alienation, 4 for organizational commitment, and 5 for job performance, in addition to items included in the personal information section.

Occupational health and safety practices scale was adapted from the article of Christopher et al. (2012) and the safety climate survey by Glendon and Litherland (2001). Work alienation scale was adapted from the article of Nair and Vohra (2010). Organizational commitment was adapted from the articles of Babin and Boles (1998), Hartline and Ferrell (1996), and Netemeyer et al. (1997). The scale as developed by Goris et al. (2003) was used for job performance.

Occupational health and safety practices include the following five basic dimensions: Occupational Hazard Prevention (OHP), Safety procedures and Risk Management (SPRM), Organizational Safety Support (OSS), First Aid Support and Training (FAST), and Safety and Health Rules (SAHR).

#### 5. Analysis and Results

The characteristics of the sample were provided in Table 1. 56% of the participants were men, and 44% were women, aging between 18 and 46 years. As for the educational level of the participants, the majority were university graduates.

Participants in the study were enrolled from different sectors including construction, chemical, logistics, and automotive. 64.7% of the participants defined themselves as technical employees. The sectorial breakdown for production, services, and others was 55.3%, 31%, and 13.7%, respectively.

Table 1. Sample characteristics

<i>Gender</i>	<i>Frequency</i>	<i>Percent</i>	<i>Marital Status</i>	<i>Frequency</i>	<i>Percent</i>
Female	192	43,7	Single	213	48,5
Male	246	56	Married	225	51,3
Missing	1	0,2	Missing	1	0,2
Total	439	100	Total	439	100
<i>Age</i>	<i>Frequency</i>	<i>Percent</i>	<i>Position</i>	<i>Frequency</i>	<i>Percent</i>
18-25	115	26,2	Engineer	43	9,8
26-35	237	54	Expert	35	8
36-45	71	16,2	Supervisor	29	6,6
46 +	15	3,4	Mid-level Manager	37	8,4
Missing	1	0,2	Top-level Manager	4	0,9
Total	439	100	General Manager	1	0,2
<i>Education</i>	<i>Frequency</i>	<i>Percent</i>	<i>Owner</i>	<i>Frequency</i>	<i>Percent</i>
				2	0,5

Primary School	16	3,6	Technical employee	284	64,7
High School	83	18,9	Missing	4	0,9
Undergraduate	96	21,9	Total	439	100
Graduate	208	47,4	<i>Ownership</i>	<i>Frequency</i>	<i>Percent</i>
Postgraduate	30	6,8	Public	50	11,4
PhD	4	0,9	Private	389	88,6
Total	437	99,5	Total	439	100
Missing	2	0,5	<i>Sectors</i>	<i>Frequency</i>	<i>Percent</i>
Total	439	100	Manufacturing	243	55,3
			Service	136	31
			Others	60	13,7
			Total	439	100

The present study investigates the organizational commitment, work alienation, and job performance levels of workers as regards OHS practices. Empirical study adopted PLS (Partial Least Squares) based structural equation modeling approach.

PLS is based on the principal components analysis and a combination of repeated regression and aimed for explaining the change in constructs involved in the model (Chin, 1998). This model has the advantage of predicting all path coefficients and individual element loads, and prevents from biased and incoherent parameter predictions. Based on latest developments, (Chin et al., 2003) suggested that PLS was an effective analytical tool to decrease Type II error and test interactions (Loureiro & Kastenzholz, 2010).

Average path coefficient (APC), average R-squared (ARS), and average variance inflation factor (AVIF) indicators were taken into consideration in model fit assessment. As for the APC and ARS, p values were also provided. In addition, it has been recommended that AVIF should be lower than 5. A comparison of competing models suggested that ARS index should be put more importance compared to AVIF or APC as regards model fit (Kock, 2011).

The confirmatory factor analysis was made to test the validity of scales and that factor loads, indicator weights, average and standard deviation values together with Cronbach's Alfa, Composite reliability, and AVE values were provided in Table 2.

Table 2. Factor loadings and reliabilities

	<i>Factor Loadings</i>	<i>Indicator Weights</i>	<i>Means (Std.Dev.)</i>	<i>Cronbach Alpha</i>	<i>Composite Reliability</i>	<i>AVE</i>
<i>Safety procedures and risk man. (SPRM)</i>			3,706 (0,74)	0,850	0,893	0,627
Ohs 1	0,762	0,243				
Ohs 2	0,838	0,267				
Ohs 3	0,846	0,270				
Ohs 4	0,793	0,253				
Ohs 6	0,711	0,227				
<i>Safety and health rules (SAHR)</i>			3,760 (0,700)	0,850	0,889	0,573
Ohs 7	0,690	0,201				
Ohs 8	0,791	0,230				
Ohs 9	0,815	0,237				
Ohs 10	0,735	0,214				
Ohs 11	0,722	0,210				
Ohs 12	0,781	0,227				
<i>First-aid supports and trainings (FAST)</i>			3,738 (0,785)	0,840	0,894	0,678
Ohs 14	0,739	0,272				
Ohs 15	0,862	0,318				
Ohs 16	0,871	0,321				
Ohs 17	0,816	0,301				
<i>Occupational hazards prevention (OHP)</i>			3,869 (0,71)	0,910	0,928	0,649
Ohs 18	0,761	0,167				
Ohs 19	0,817	0,180				

Ohs 20	0,845	0,186				
Ohs 21	0,770	0,169				
Ohs 22	0,808	0,178				
Ohs 23	0,810	0,178				
Ohs 24	0,826	0,182				
<i>Organizational Safety Supports (OSS)</i>			3,824 (0,80)	0,875	0,914	0,727
Ohs 26	0,842	0,289				
Ohs 27	0,851	0,293				
Ohs 28	0,893	0,307				
Ohs 29	0,824	0,283				
<i>Work Alienation (WA)</i>			2,666 (1,12)	0,955	0,962	0,762
Wa 1	0,843	0,138				
Wa 2	0,900	0,147				
Wa 3	0,882	0,145				
Wa 4	0,895	0,147				
Wa 5	0,885	0,145				
Wa 6	0,856	0,140				
Wa 7	0,875	0,143				
Wa 8	0,848	0,139				
<i>Organizational Commitment (OC)</i>			3,697 (0,90)	0,914	0,939	0,794
Oc 1	0,868	0,273				
Oc 2	0,910	0,286				
Oc 3	0,896	0,282				
Oc 4	0,890	0,280				
<i>Job Performance (JP)</i>			4,023 (0,68)	0,853	0,895	0,632
Jp 1	0,769	0,243				
Jp 2	0,830	0,262				
Jp 3	0,806	0,255				
Jp 4	0,863	0,273				
Jp 5	0,711	0,227				

Adequacy of measurements is measured by assessment of the reliability of each item and the discriminant validity (Hulland, 1999). Reliability of items was assessed by investigation of measurement loads within the corresponding construct. In case that all scale loads measuring reflective constructs approach or exceed 0.70, this indicates that the construct accounts for more than 50% of the variance in observed variables (Loureiro & Kastenholtz, 2010). A review of Table 2 provides that Ohs7 value is close to 0.70 and therefore the said item was not excluded.

Cronbach's Alfa and composite reliability have been used for testing the internal consistency of measurement models. Composite reliability was focused for assessment construct reliability and prediction of internal consistency. Composite reliability was more suitable for PLS-SEM since unlike Cronbach's Alfa it did not assume that all indicators were equally reliable (Hair et al., 2011).

Nunnally and Bernstein (1994) recommended that Cronbach's Alfa reliability coefficient should be above the threshold value of .70. Composite reliability is used to test the reliability of constructs and the said indicator is more precise compared to Cronbach's Alfa.

As it is seen from Table 2, the factor loads and  $\alpha$  values are above the threshold value of 0.70 as suggested by Agarwal and Karahanna (2000) and that each manifest variable (MV) accounts for a large percentage of change in the corresponding latent variable (LV). Therefore, it was concluded that the measurement model had composite reliability and internal consistency.

Table 2 shows that all constructs are reliable; the composite reliability threshold value was defined as 0.70. Analyses indicated that this value was exceeded in all constructs and even that internal consistency exceeded the value of 0.89 in all constructs.

The AVE values of all the constructs in Table 2 were above 0.50 stating that the indicators measured the changes by 50% and more.

Table 3. Correlations among latent variables

	1	2	3	4	5	6	7	8
1.SPRM	<b>0,792</b>							
2.SAHR	0,704**	<b>0,757</b>						
3.FAST	0,507**	0,614**	<b>0,824</b>					
4.OHP	0,600**	0,715**	0,683**	<b>0,806</b>				
5.OSS	0,515**	0,605**	0,551**	0,627**	<b>0,853</b>			
6.WA	-0,093	-0,105*	0,054	-0,027	-0,110*	<b>0,873</b>		
7.OC	0,523**	0,537**	0,317**	0,418**	0,524**	-0,186**	<b>0,891</b>	
8.JP	0,331**	0,326**	0,195**	0,343**	0,358**	-0,235**	0,297**	<b>0,795</b>

Note. Square roots of average variances extracted (AVE's) shown on diagonal.\*p<0.05; \*\*p<0.01.

The fact that factor loads of observed variables (MV) were higher in corresponding latent variables (LV) as compared to other non-corresponding variables indicated convergent validity. As it is seen in Table 2, each MV was loaded to corresponding LV (convergent validity).

Square roots of the explained average variance values were diagonally placed in Table 3, and cross correlation values between the factors were placed below the diagonal row. It is seen in table 3 that the variance as explained by each LV was greater than the correlation values indicating the association between the relevant LV and the other LVs. Therefore, it can be said that discriminant validity was attained.

After the measurements were tested for validity, the structural model as provided in Figure 1, which represented the relations among the constructs assumed in the theoretical model or latent variables, was tested.

WarpPLS software was used to test the structural model (Kock, 2011). Following goodness for fit results were obtained: Average path coefficient (APC = 0.171\*\*), Average R-squared (ARS = 0.190\*\*), and Average Variance Inflation Factor (AVIF = 1.848). In order for a model can be considered powerful APC and ARS should be significant at the level of  $p < 0.01$  and that AVIF value should be lower than 5 (Kock, 2011).

Accordingly, as for the impact of OHS on alienation, SPRM had no significant effect on alienation. SAHR had a significant and negative impact on alienation ( $\beta = -0.157$ ;  $p < 0.05$ ). FAST had a significant and positive effect on alienation ( $\beta = 0.103$ ;  $p < 0.05$ ). OHP had no significant effect on alienation. OSS had a significant and negative impact on work alienation ( $\beta = -0.144$ ;  $p < 0.05$ ). The  $R^2$  values obtained via the model are presented in Figure 2.

As for the impact of OHS on organizational commitment, SPRM had a significant and positive effect on organizational commitment ( $\beta = 0.26$ ;  $p < 0.01$ ). SAHR had a significant and positive effect on organizational commitment ( $\beta = 0.27$ ;  $p < 0.01$ ). FAST had a significant and positive effect on organizational commitment ( $\beta = 0.13$ ;  $p < 0.05$ ). OHP had no significant effect on organizational commitment. OSS had a significant and positive effect on organizational commitment ( $\beta = 0.31$ ;  $p < 0.01$ ). The  $R^2$  value for the organizational commitment was 0.30.

Work alienation had a significant and negative effect on job performance ( $\beta = -0.261$ ;  $p < 0.01$ ). Organizational commitment had a significant and positive effect on job performance ( $\beta = 0.243$ ;  $p < 0.01$ ). The findings were presented in Table 4.

Table 4. PLS path coefficients

Independent Variables	Direct findings for dependent variables						Indirect findings	
	WA	<i>p</i>	OC	<i>p</i>	JP	<i>p</i>	JP	<i>p</i>
SPRM	0,055	0,242	0,261	0,001			0,049	0,044
SAHR	-0,157	0,022	0,273	0,001			0,107	0,001
FAST	0,103	0,038	0,134	0,040			0,006	0,393
OHP	0,080	0,194	0,026	0,330			-0,015	0,323
OSS	-0,144	0,012	0,312	0,001			0,113	0,001
WA					-0,261	0,001		
OC					0,243	0,001		

Furthermore, the indirect effect of SPRM, SAHR, and OSS on Job Performance was also investigated. SPRM, SAHR, and OSS had a significant effect on job performance at respective levels of  $\beta = 0.049$  ( $p \leq 0.05$ ), ( $\beta = 0.107$ ), and ( $\beta = 0.113$ )  $p \leq 0.01$ . In addition, organizational commitment and alienation that had direct impact on job performance together with SPRM, SAHR, and OSS that had indirect impact accounted 18% of the change in job performance. Table 5 shows that results of the hypotheses.

Table 5. Hypotheses results

Hypotheses	Results
H <sub>1</sub> : Occupational hazard prevention – work alienation	NS
H <sub>2</sub> : Safety procedures and risk management – work alienation.	NS
H <sub>3</sub> : Organizational safety supports – work alienation.	Supported
H <sub>4</sub> : First-aid supports and trainings – work alienation.	Supported
H <sub>5</sub> : Safety and health rules – work alienation.	Supported
H <sub>6</sub> : Occupational hazards prevention – organizational commitment.	NS
H <sub>7</sub> : Safety procedures and risk management – organizational commitment.	Supported
H <sub>8</sub> : Organizational safety supports – organizational commitment.	Supported
H <sub>9</sub> : First-aid supports and trainings – organizational commitment.	Supported
H <sub>10</sub> : Safety and health rules – organizational commitment.	Supported
H <sub>11</sub> : Work alienation – job performance.	Supported
H <sub>12</sub> : Organizational commitment – job performance.	Supported
H <sub>13</sub> : Safety procedures and risk management – job performance.	Supported
H <sub>14</sub> : Safety and health rules – job performance.	Supported
H <sub>15</sub> : Organizational safety supports – job performance.	Supported

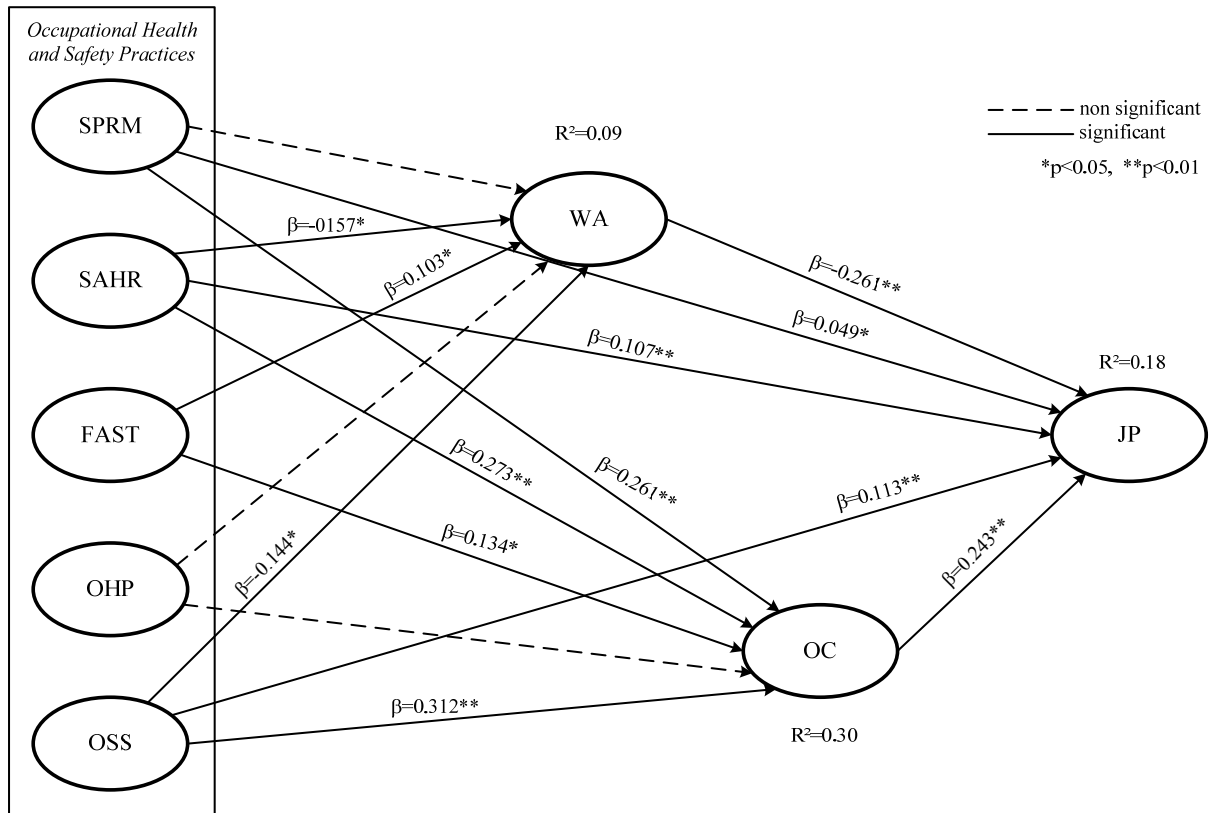


Figure 2. Total effects and revised model

### 6. Discussion and Conclusion

The literature accepts that perceived organizational support is an effective factor on organizational commitment;

however, the same became visible only recently in occupational safety climate literature. The focus of the present study is to investigate the likely impact of occupational health and safety on worker behaviors. Occupational health and safety studies were reviewed under five dimensions: These are as follows. First, safety and health rules (SAHR); strong commitment of organizations for workplace safety allows an increase in desired worker behaviors and attitudes as well as a decrease in problems associated with occupational safety. Second, safety procedures and risk management (SPRM); a good safety and risk management is a system that is entirely integrated into the company and that is binding. Available policies, strategies, and procedures in the company provide standards and harmony. Third, first aid support and training (FAST); first aid trainings improve the motivation of participants in order to prevent occupational accidents and diseases and create milieu for the workers can demonstrate positive behaviors. Fourth, organizational safety support (OSS); organizations with a good working climate may increase the potential of their workers to higher levels. Fifth and the last one is occupational hazard prevention (OHP); controlling hazardous situations, appropriate physical working conditions, rewarding and recognition, development of friendship and companion, and workers' fitness in jobs create an efficient and competent working environment. Organizations' ability to increase the level of organizational commitment and motivation, and improve throughputs should design working environments depends on working environment design.

### *6.1 Impact of Occupational Health and Safety Practices on Work Alienation*

Occupational hazard prevention did not affect work alienation ( $H_1$ ). In addition, safety procedures and risk management were found no effect on work alienation ( $H_2$ ). These findings of the study are incoherent with the literature (Banai & Reisel, 2007; Allen & LaFollette, 1977). Banai et al. (2007) explain this incoherence by stating that different type of alienations might be seen across countries.

Both organizational safety support, and safety and health rules were found significant and negatively related to work alienation ( $H_3$  and  $H_5$  respectively). These finding are in consistent with the literature (Byrne & Hochwarter, 2008; Westgaard & Winkel, 2011). Furthermore, first aid support and training was found to have a significant and positive effect on work alienation ( $H_4$ ). Related studies suggest that organizational arrangements (formalization) might be positively related to alienation on the grounds that policy and procedures limited individual control and skills of the workers (Chiaburu et al., 2014).

### *6.2 Impact of Occupational Health and Safety Practices on Organizational Commitment*

Occupational hazard prevention was detected to have no significant effect on organizational commitment ( $H_6$ ). This is incoherent with the findings of Danish et al. (2013) in the literature. A reason of it may be the fact that the employees perceived this variable as the hygiene factor. Such elements like management policy and management, working conditions, wage levels, level of happiness at private life, and the relationship between lower and higher ranks in the organization etc. are called as "hygiene factors." In case hygiene factors are not adequately provided, it becomes impossible to keep workers in the organization and have them work. Hygiene factors will not motivate personnel but only prevent dissatisfaction. However, lack of hygiene factors will disrupt motivation (Eren, 2003).

Safety procedures and risk management were found significant and positively related to organizational commitment ( $H_7$ ). This finding is consistent with the literature. Creating perception of safety climate by emphasizing organizational policies and practices has positive effect on employee commitment. Herein, DeJoy et al. (2010) also confirm that practices applied to increase safety climate can conclude with more committed and loyal employees. Moreover, general health and safety policies demonstrate the management's willingness to provide the workers with a healthy and safe workplace (Christian et al., 2009). Michael et al. (2005) indicate that time work employees consider organization's commitment for safety as a kind of perceived organizational support. Gyekye and Salminen (2007) also point out that workers with supportive perception reciprocate this with greater affective commitment, participation, and loyalty.

Organizational safety support was found significant and positively related to organizational commitment ( $H_8$ ). This result is coherent with the findings of Yeh (2014). Organizational support theory and social exchange theory helped with explaining the antecedents and results of affective commitment in many studies such as Rhoades et al. (2001) and Wachter and Yorjo, (2014). Similarly, Huang et al. (2006) state that administration with proactive and constructive return-to-work policies would likely deliver a powerful message to employees since their physical and psychological well-being is matter of importance for organization.

First aid support and training were found significant and positively related to organizational commitment ( $H_9$ ). Our findings are consistent with the similar studies in literature (Lingard, 2002). The significant effect of the organization's first-aid support and training practices on organizational commitment is backed by Michael et al. (2005) stating that intangible benefits build an attitude in the minds of employees known as perceived

organizational support. Perceived organizational support has been found positively related to outcomes like affective commitment.

Safety and health rules were found significant and positively related to organizational commitment ( $H_{10}$ ). Accordingly, the works carried out in developing employees' work process in organizations have a significant effect on employee organizational commitment. The studies of May and Schwoerer, (1994) and Taiwo, (2010) in the literature support also this finding.

### *6.3 Impact of Occupational Health and Safety Practices, Work Alienation and Organizational Commitment on Job Performance*

Work alienation were found significant and negatively related to job performance ( $H_{11}$ ). This is also coherent with the literature. The studies indicated that there were negative relationships between work alienation and job performance since alienation was characterized by disruption in sense of self, workers' attitudes, business goal, and social networks. Researchers (Podsakoff et al., 1986; Michaels et al., 1988; Goldsmith et al., 1996; Banai et al., 2004; Banai & Reisel, 2007; Ganesh & Joseph, 2011; Chiaburu et al., 2014; Xue et al., 2014; Sulu et al., 2010) mostly emphasize a negative relationship between alienation and performance output. For instance, Tummers and Dulk, (2013) found that when midwives feel alienated from their work, this negatively influences the effort they put into their work. On the other hand, organizational commitment was found significant and positively related to job performance ( $H_{12}$ ). Camilleri (2002) and Sigri (2007) endorse this finding since organizational commitment has been considered a determinant of high performance. Safety procedures and risk management were found significant and positively related to job performance ( $H_{13}$ ). This finding is in consistent with the similar studies in the literature (Gyekye & Salminen, 2007; Abad et al., 2013). Safety and health rules were found significant and positively related to job performance ( $H_{14}$ ). This is supported by the literature (Danish et al., 2013; Taiwo, 2010; May & Schwoerer, 1994). Organizational safety support were found significant and positive effect on job performance ( $H_{15}$ ). This is also coherent with the findings of Turunç and Çelik (2010); Rhoades et al. (2001); Mearns et al. (2010) in the literature.

## **7. Limitations and Further Research**

The present study has limitations as with all the research fields. Effects of occupational health and safety on alienation, organizational commitment, and job performance were investigated through a single model. Its effects on workers' motivation, working hours, and intention to cease employment may be involved in further studies. The effects of occupational health and safety on alienation, organizational commitment, and job performance can also be investigated on the bases of sex, culture, white- and blue-collared, and payment. In addition, the self-reporting techniques can be used to collect data.

Safety as a fundamental human right is a primary demand of the majority of governments and citizens. Furthermore, survival of the organizations in exceptional circumstances such as economic crisis, natural disaster so on depends on the organizational commitment and contribution to the organization of well trained and experienced employees. Many research results support that occupational health and safety has positively significant impact on employee behavior and attitude. While fearing profitability in assessing contributions made by the employees to the organization, especially Occupational health and safety practices influence employees attitude and behavior remarkably, which in turn relation with job satisfaction, organizational commitment, job performance, intention to leave are taken into consideration.

Sustaining qualified human resources to compete in today's competitive working life is very important. According to the principle of reciprocity, Occupational health and safety practices as perceived organizational support will yield work from employees for the benefit of the organization. The employees acting with a sense of gratitude will increase their efforts for the wellness of the organization.

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### **Appendix: Measurement scales**

#### *Safety procedures and risk management (SPRM)*

Workers are informed about changes in division of labor in my organization.

Probable risks and results are defined in my organization.

Written work procedures are compliant with practice in my organization.

Workers can easily recognize the relevant procedure of each task in my organization.

There is adequate number of employees in my organization to do the necessary work (dropped).

Workload is reasonably balanced in my organization.

#### *Safety and health rules (SAHR)*

Timing for sufficient rest and appropriate working is underway in my organization.

Safety rules are always practical in my organization.

Safety rules are followed in my organization even under tight schedule.

Health examination is made in my organization prior to the employment.

Periodical health examinations are undertaken in my organization after selection (employment, hiring).

Conditions threatening health and safety are removed as much as it is possible in my organization.

My organization specifically takes into consideration the situation of groups that require special policies (elderly, disabled etc.) during risk assessment (dropped).

#### *First-aid supports and trainings (FAST)*

Emergency treatment is available in case of accident in my organization.

Workers are trained against health hazards in my organization.

Workers are provided with health and hygiene training in my organization.

Workers are provided with first aid training in my organization.

*Occupational hazards prevention (OHP)*

Workers assigned to serious and likely hazardous tasks use safety glasses, helmets, boots, gloves, masks, jumpsuits and shoes in my organization.

Only those with necessary equipment and specifically assigned workers have access to serious and likely hazardous places serious and likely hazardous places in my organization.

Workers assigned to serious or likely hazardous tasks are regularly controlled via internal audits to see whether they follow instructions and procedures set for workers' health and safety in my organization.

Deficiencies and mistakes revealed during internal audits for safety and health are monitored and removed.

There is appropriate lay-out and lighting in the factory, where I work.

Appropriate and effective waste disposal is underway in the factory, where I work.

There are health and safety devices in my workplace.

*Organizational Safety Supports (OSS)*

Adequate and timely medical treatment provided in my workplace (dropped).

Sufficient time is granted for a worker can be recovered.

Adequate damages are paid in case of injury.

Occupational safety regulation is followed in my organization.

Due care is shown in my organization in order for the privacy of workers (medical records) are not disclosed.

*Work Alienation (WA)*

I am not pleased about what I do in my organization; I spend time only to be paid.

It is a painful and boring experience to face my daily duties in my organization.

For me working is rather drudgery or load.

I feel myself detached/distanced in my organization.

I wish I do a different thing.

In time I have become disappointed about my job.

I don't feel to show better efforts in my job.

I don't feel engaged to the events occurring around me in my organization (I don't care about anything).

*Organizational Commitment (OC)*

This organization makes personal sense to me.

I feel a strong commitment for this organization.

I feel myself a member of the family in this organization.

I feel myself emotionally engaged to this organization.

*Job Performance (JP)*

I always complete the tasks involved in the job description in my workplace.

I fulfill my responsibilities as required by my job.

I am not successful in fulfilling my basic tasks.

I don't neglect the tasks as required by my job.

I fulfill the formal tasks as required by my job.

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