The effect of job safety analysis on risk perception of workers at high risk jobs in a refinery

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Abstract

Background and aims: Risk perception is a key parameter influencing the behavior of the workers at workplace. The present work contributes to study the effect of Job Safety Analysis (JSA) on risk perception of the high risk jobs in a refinery complex.

Methods: Five high risk jobs were identified using "Drop off" method in a refinery complex. Risk perception was evaluated using a standard questionnaire. The risk perception of the workers was estimated pro and post application of Job Safety Analysis. The questionnaire included different groups of questions for clarifying the risk perception of workers from different point of views. Same workers were asked to answer these questions before and after applying the job safety analyses. The results were evaluated to identify whether the job safety analyses does influence the risk perception of workers or not.

Results: The analyses of 50 jobs active in production line and technically supporting sections showed that welding, cutting, scaffolding, insulating and piping have the highest risks respectively. The results showed that, the application of the JSA will significantly (PValue<0.01) increase the worker's risk perception of hazardous agents in the workplace, the utility accidents, human injuries, injuries at the workplace, production versus safety, accident reasons and personal protective equipments. This effect was different among different categories of jobs, aging, working experience and literacy rate.

Conclusion: The application of the JSA may modify the risk perception while identifying the risks.

Keywords: Job Safety Analysis, Risk Perception, Worker, Refinery

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