

## Effects of Safety Intervention Program towards Behaviors among Rubber Wood Processing Workers Using Theory of Planned Behavior

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**Abstract :** Rubber wood processing is one of the most important industries in southern Thailand. The process has several safety hazards for example unsafe wood cutting machine guarding, wood dust, noise, and heavy lifting. However, workers' occupational health and safety measures to promote their behaviors are still limited. This quasi-experimental research was to determine factors affecting workers' safety behaviors using theory of planned behavior after implementing job safety intervention program. The purposes were to (1) determine factors affecting workers' behaviors and (2) to evaluate effectiveness of the intervention program. The sample of study was 66 workers from a rubber wood processing factory. Factors in the Theory of Planned Behavior model (TPB) were measured before and after the intervention. The factors of TPB included attitude towards behavior, subjective norm, perceived behavioral control, intention, and behavior. Firstly, Job Safety Analysis (JSA) was conducted and Safety Standard Operation Procedures (SSOP) were established. The questionnaire was also used to collect workers' characteristics and TPB factors. Then, job safety intervention program to promote workers' behavior according to SSOP were implemented for a four month period. The program included SSOP training, personal protective equipment use, and safety promotional campaign. After that, the TPB factors were again collected. Paired sample t-test and independent t-test were used to analyze the data. The result revealed that attitude towards behavior and intention increased significantly after the intervention at  $p < 0.05$ . These factors also significantly determined the workers' safety behavior according to SSOP at  $p < 0.05$ . However, subjective norm, and perceived behavioral control were not significantly changed nor related to safety behaviors. In conclusion, attitude towards behavior and workers' intention should be promoted to encourage workers' safety behaviors. SSOP intervention program e.g. short meeting, safety training, and promotional campaign should be continuously implemented in a routine basis to improve workers' behavior.

**Keywords :** job safety analysis, rubber wood processing workers, safety standard operation procedure, theory of planned behavior

**Conference Title :** ICOHS 2018 : International Conference on Occupational Health and Safety

**Conference Location :** Miami, United States

**Conference Dates :** March 12-13, 2018