**Abstract:** Background: Respiratory disease due to working conditions involving 50 million cases per year include a third of all due to work diseases and are considered one of the main causes of workers absence from work. Some of the due to work diseases can be prevented by using personal protective equipment. One of the effective patterns is giving the workers training on health and specifically safety. The aim of this study is to use this pattern of training so as to change behaviors and consequently increase the use of protective personal respiratory equipment by workers of carbon Blak factory which produces lots of emissions like soot.

Methods: This study quasi-experimental intervention and is performed in the before and after pattern. In this study intervention was performed on 100 workers (test and control) of the factory based on the training program designed according to the BAZNEF pattern. SPSS software was used for analyzing the data.

Results: Results show that the average of knowledge score, attitude, intention, enabling factors and performance in the test group showed a noticeable increase ($p < 0.00001$) in comparison with the control group after the intervention. Furthermore, the average of subjective norms in the test and control groups did not show a significant difference maybe because changes in subjective norms my take longer time.

Conclusion: By analyzing data it was found that training intervention based on the BAZNEF pattern results in the increasing of the use of protective personal respiratory equipment by workers. Finally, continuousness and training follow-ups are recommended in the implementation of these programs.

**Keywords:** Model BASNEF, respiratory protection equipment, education

**Presentation:** Poster