Unsafe work environments can be both unhealthy for employees and costly for organizations. Safety motivation is essential to enhancing safety behaviors among employees. The objective is to evaluate whether six different interventions including safety training increase safety motivation. A validated questionnaire was used at two metal companies, two municipal agencies, one paper mill, and one plastic company. Statistical tests were used to compare the results at the factorial and item levels. In three cases, safety motivation changed significantly at the factorial level. There was a significant difference in each intervention at the item level. The outcomes indicate that the degree of participation, the number of occasions, the primary target group, and the decision maker of the intervention affect safety motivation.