

Manistique inc.

[Health & Medicine](#), [Disability](#)



Manistique Inc. devised a safety compliance program within the organization whose aim is to train and monitor employees inducing low injury rates and higher safety compliance standards. Manistique offers rewards to employees with lower injury rates. The program was implemented on a large-scale throughout the organization amongst 83 plants. Without any statistical analysis it would be impossible to reach a conclusion as to whether the program has improvised the injury rates or not; however, individuals remark that there has been a slide in the injury rates depicting a favorable influence of the training program.

The objective at Manistique is to standardize the program across the board so that there is ample saving on administrative costs incurred due to workplace injuries. Before this can be done so, the terms of the program have to be decided which will come in handy in convincing the management of the worthiness of this program. Therefore, the aim of this paper is to analyze the relationship between the terms of the safety program and the most two important measures of safety rates:

1. Safety attitudes
2. Time lost due to injuries.

Making use of historical information as well as data available from the last quarter, this paper will use statistical techniques to reach a conclusion as to whether the safety program has been successful in lowering injury rates. Analysis The report is attached with the original dataset provided for the analysis of this report. We shall begin by analyzing the correlations between the different variables in the dataset to ascertain a conclusion as to whether the program has really improved safety attitudes and improved the time lost in injuries or whether the change is statistically insignificant

Correlation between safe training attitude (safetrain) & i) Total number of injuries (tinjuries) Using the CORREL function in Excel, the value for the correlation co-efficient was: The low positive value of the correlation co-efficient suggests that there is no significant relationship between the safety attitude and the actual number of workplace injuries i. e. the attitude has not helped the practical level of injuries incurred at Manistique. For a significant cause-and-effect relationship the value of the correlation coefficient should have been positively larger. i) Total number of deaths (tfatalities) Using the CORREL function in Excel, the value for the correlation co-efficient was: The correlation co-efficient is negative (as should not have been the case). The value is not significantly high (very close to 0), which suggests that safety standards have hardly any influence in lowering the number of deaths at Manistique. On the other hand it has slightly increased the number of injuries (correlation co-efficient is slightly positive). Thus, safety attitudes have not at all been effective in reducing the number of injuries. iii) Disability days (disabdays)

Using the CORREL function in Excel, the value for the correlation co-efficient was: Again the negative value suggests that there is a negative relationship between safety attitude and disability days (the lower the attitude, the lower the disability days). However, the value of the correlation co-efficient is very small which negates any strong relationship between the two variables.

Correlation between safety support from co-workers (safesupport) & i) Total number of injuries (tinjuries) Using the CORREL function in Excel, the value for the correlation co-efficient was:

The correlation coefficient is positive. This suggests that the increased safety support from co-workers actually has a positive influence as it results in a drop in number of injuries at Manistique. However the low value of the coefficient suggests no strong cause-and-effect relationship for the program implemented at Manistique. ii) Total number of deaths (tfatalities) Using the CORREL function in Excel, the value for the correlation co-efficient was: The correlation co-efficient is negative (as should not have been the case).

This negates all possibilities of a favorable influence of the coworker safety in reducing the number of deaths at Manistique; in fact, the relationship is quite the opposite with a very small magnitude. iii) Disability days (disabdays) Using the CORREL function in Excel, the value for the correlation co-efficient was: The low negative value again brings the conclusion that there exists a negative relationship but the degree of influence is very meek. This brings about the conclusion that there is no significant influence of the co-worker support attitude on the number of disability days; it is quite the opposite.

Correlation between safety support from co-workers (feelsafe) & i) Total number of injuries (tinjuries) Using the CORREL function in Excel, the value for the correlation co-efficient was: The correlation co-efficient is negative (as should have been the case). However, the highly negligible value of the co-efficient suggests no significant relationship between a feeling of safety amongst the workers and the actual injuries at Manistique. ii) Total number of deaths (tfatalities) Using the CORREL function in Excel, the value for the

correlation co-efficient was: The correlation coefficient is positive (as should not have been the case).

Increasing confidence held by a worker that he/she is safe does not decrease the number of injuries at Manistique; rather it increases it weakly. This is ample evidence for a lack of good relationship between the two variables. iii) Disability days (disabdays) Using the CORREL function in Excel, the value for the correlation co-efficient was: The low negative value again brings the conclusion that there exists a positive relationship but the degree of influence is very meek. This brings about the conclusion that there is no significant influence of the belief of safety held by a worker on the number of disability days.

Conclusion Based on the calculations made in the above section, the conclusion that can be formed here is quite obvious and brief: the new safety compliance program at Manistique has no significant influence upon improving the number of injuries, fatalities or disability days at Manistique. The training program, co-worker support regarding the safety program or even the belief held by the workers that their safety has increased as a result of the program have no cause-and-effect relationship good enough to reduce the number of worker injuries, deaths and the number of disability days at Manistique.

Moving barely above the 0.1 correlation level, there is no need for statistical hypothesis testing methods to be employed in reaching the conclusion. At any confidence level, these values are sufficiently weak enough to conclude that the safety compliance program is of significant importance in saving

administrative costs for Manistique by reducing the number of injuries, deaths or disability days at Manistique.