

## **The impact of safety climate beyond safety outcomes: job satisfaction, employee engagement and objective turnover rate**

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**Abstract.** Safety climate is often implicated as a key factor in the promotion of injury-reducing behavior and safe work environments. However, less attention has been paid to the outcomes of safety climate beyond traditional safety outcomes. This study aims to make the following contributions: examining how safety climate perceptions at both group and organization levels might predict outcomes other than accidents; using social exchange theory as the framework for the relationships between safety climate, job satisfaction and performance outcomes; and being among the first to assess how safety climate may impact job performance outcomes for lone workers (i.e., truck drivers). This study is among the first to assess the impact of safety climate beyond safety outcomes.

**Keywords.** Safety climate, job satisfaction, employee engagement, objective turnover rate.

### **1. Introduction**

In recent years, safety climate research has aimed to address how aspects of the organizational environment can impact worker health and injury outcomes. Research has shown that safety climate is among the strongest indicators of safety outcomes (Christian, Bradley, Wallace, and Burke, 2009). Recently, Huang, Zohar, Robertson, Garabet, Lee, and Murphy (2013) showed that truck drivers' perceptions of safety climate are predictive of employee safety behavior, which in turn impacts reported injury severity.

In this study, specifically two types of employee outcomes were examined: (1) psychosocial factors and (2) human resource and performance outcomes. Job satisfaction was used as the indicator of psychosocial or strain outcomes while employee engagement and turnover were used to represent performance and human resource outcomes. According to the tenets of social exchange theory, we propose that when employees work in more safe conditions it is possible they see these actions as benefits to their personal well-being and respond by "paying back" the organization with safe behavior and other positive outcomes. Therefore we hypothesize:

Hypothesis 1: More positive employee safety climate perceptions (both organizational-level and group-level safety climate) will relate to higher levels of (a) employee job satisfaction, (b) employee engagement, (c) lower employee turnover.

Hypothesis 2: Job satisfaction is hypothesized to mediate the relationship between safety climate (both organizational-level and group-level safety climate) and (a) employee engagement and (b) employee turnover.

## 2. Methods

Data were collected from a large trucking firm as part of a larger project. The current study collected 2,204 surveys, with truck drivers as participants. Measures included in the survey were organization- and group-level safety climate perceptions, job satisfaction, engagement, tenure, and turnover. Turnover data (whether or not a driver was still employed with the company) was available for a time period of one year after the initial survey. Matched data (i.e., survey results and turnover information) were not available for all participants and the final sample included 2,117 truck drivers.

## 3. Results

Organization- and group-level safety climate subscales, engagement, and job satisfaction were all statistically significantly related, supporting Hypothesis 1a and 1b. Specifically, job satisfaction and engagement were significantly correlated with the organization-level and group-level safety climate subscales.

Logistic regression analyses showed that organization- and group-level safety climate subscales were predictive of turnover (organizational-level OR = 1.35,  $p < .01$ ; group-level OR = 1.31,  $p < .01$ ). Survival analysis indicated that for the above- and below-mean safety climate groups, a statistically significant difference in turnover rate was detected (organization-level safety climate subscale:  $\chi^2 = 13.22$ ,  $df = 1$ ,  $p < .01$ ; group-level safety climate subscale:  $\chi^2 = 24.87$ ,  $df = 1$ ,  $p < .01$ ). Under the low safety climate condition, truck drivers reported quicker and more frequent turnover, supporting Hypothesis 1c.

The mediating effect of job satisfaction (Hypotheses 2a and 2b) was found to be significant in that job satisfaction partially mediated the relationship between safety climate (at both the organization- and group-level) and employee engagement, supporting Hypothesis 2a, and fully mediated the relationship between safety climate (both organization- and group-level) and employee turnover, supporting Hypothesis 2b. The final path model showed good model fit (i.e.,  $\chi^2 = 3.17$ ,  $df = 2$ ,  $p = .21$ , CFI = 1.00, TLI = 1.00, RMSEA = .02).

## 4. Discussion and Conclusion

Overall, these results show that positive safety climate perceptions (at both the organization and group level) predict increased employee job satisfaction, increased employee engagement, and decreased turnover, while employee job satisfaction also partially mediates the relationship between safety climate and engagement and fully mediates the relationship between safety climate and turnover.

### References

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