

Public Abstract

First Name:Charan Teja

Middle Name:

Last Name:Valluru

Adviser's First Name:Linsey

Adviser's Last Name:Steege

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:SS 2012

Department:Industrial Engineering

Degree:MS

Title:Measuring the relationship between Individual and Cultural Traits (ICT) and safety perceptions in manufacturing: Development of a Conceptual Model

Employee safety has always been one of the most important priorities in "high-risk" industries such as manufacturing. Recent investigations into some of the major industrial accidents have redirected the focus of safety researchers from "safer technology" to "human and organizational factors". Concepts such as culture (having a better underlying culture for safety) and safety climate (perceptions of the organization's employees with regards to its safety conditions) have recently received a lot of attention.

Modern organizations are spread across the globe and are comprised of a highly multicultural workforce. Most manufacturing requirements in developed nations are either outsourced or are met through an extension of the organization in economically developing countries with cheaper labor and nearly nonexistent safety regulations (Ali, 2006). While this situation opens up "cultural challenges" for organization management committed towards maintaining the same underlying safety culture throughout their organization, the exclusion of individual level factors associated with accident rates have seldom been included in a safety culture model.

This study takes the individual level approach in determining a better model for safety culture. It identifies various factors (cultural and non cultural) at the individual level under Individual and Cultural Traits (ICT). A total of 93 manufacturing employees from India and the United States were surveyed online as part of a pilot study. The resulting regression equation shows similarities to previously established factors that are associated with occupational injury rates. Future work using a larger stratified and controlled sample with better variance would provide a better model.