The Occupational Health and Safety Administration (OSHA) reports that every year 4.1 million American workers are seriously injured, including an estimated 4,500 deaths from workplace accidents at an annual direct and indirect cost estimated at hundreds of billions (OSHA, 2012). While much has been written about the compelling reasons to implement a system to manage safety, no studies have been done on the possible alignment of theories behind managing quality with those behind managing safety. To this end, building on the established theory of quality management (ThQM) initially outlined by Anderson, Rungtusanatham, Schroeder, and Devaraj (1995), as retested and refined by other researchers, the current research applies principles associated with the management of quality to the management of safety.
This research required adapting and adopting a path analytic model, survey questions, and statistical analyses from the work done on the ThQM in order to assess whether it could be applied to safety management. An online survey of 40 questions was used to test the seven model elements of “Leadership in Managing Quality and Safety,” “Communication and Cooperation,” “Workforce Management,” “Process Management,” “Continuous Improvement,” “Client Focus,” and “Client Satisfaction.” The surveys were distributed to quality and safety professionals represented by the American Society for Quality (ASQ) and American Society of Safety Engineers (ASSE), for a total of 143 completed surveys, with the largest number coming from manufacturing organizations. Quality professionals were asked to indicate their level of agreement with the presence of various quality elements within their organizations, while the safety professionals were asked the same related to equivalent safety elements.

Analysis of responses yielded good internal consistency for the variables, and good correlations between the quality and safety professional responses. Finding no statistical differences between the quality and safety professionals allowed the data to be combined and used in the development of a path model fitted to this data. The proposed fitted path model has an $r^2$ of .70 meaning that this model, which applies the same elements to both the management of quality and safety, explains 70% of variance within the outcome variable of perceived client satisfaction.

This study serves both a theoretical and practical purpose. At a theoretical level, this study offers evidence that the organizational functions of safety and quality can follow the same management model, broadening the understanding of the ThQM, and advancing the research knowledge on this issue. At a practical level, the survey, statistical analysis, and modeling techniques could be used to help identify and focus resources on areas of weakness, and leverage strengths in the management of safety and quality to improve client satisfaction. Improved client satisfaction from the perspective of quality means an organization can better satisfy customers by reducing product or service deficiencies, while from the perspective of safety, means an organization can better satisfy employees by reducing injuries. Both are desired outcomes.