Reduction of Unsafe Driving Behaviors at Work
– A Field Study
改善不安全之駕駛行為 - 實地研究報告

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ABSTRACT

Reduction of Unsafe Driving Behaviors – A Field Study

In the field of occupational safety and health, worker behavior has often been associated with the cause of workplace accidents and injuries. For this reason, understanding worker behavior is a major area of concern for organizations striving to reduce occupational accidents and injuries in the workplace. Recent efforts to improve workplace safety have included programs based on applied behavioral research. These efforts are referred to as behaviour-based safety (BBS) programs.

Over the last couple of decades, BBS approach to safety has been widely used and helped many organizations to improve their accident records. Its applications have been demonstrated successfully in different industrial and business settings including manufacturing plants, laboratories, general offices, hospitals and government departments. However, most of these successful references have taken place in industrialized and developed countries. Questions however, remain concerning the impact of these behavioural intervention techniques on other developing countries such as China, where work related accidents remain a major societal problem with significant economic and humanitarian implications. The need for systematic research to examine whether the BBS approach can improve the safety performance of organizations operating in China is evident.

The overarching objective of the present research is to examine the effects on safe driving behaviors from the application of the BBS approach in China. The research included a 2-year long 2 phased field study conducted in three companies at three different cities in China, one in Panyu, one in Guangzhou and the other one in Shanghai, between May 2008 to April 2010. The subject of the field study is company vehicle drivers.
Phase 1 was designed to observe the behaviour changes of the drivers and to capture the safety perception information collected from the safety climate survey before and after the introduction of the BBS interventions. To understand whether there were further changes of the driving behavior and safety perception of the drivers after the withdrawal of the BBS intervention, drivers’ behavior was re-observed and safety climates re-surveyed in Phase 2 which took place at one of the three companies 12 months after the Phase 1 field study.

The results of Phase 1 showed that there were significant improvements in the driving behavior of the company car drivers in all three companies as a result of the implementation of the BBS program. Apart from the improvement in the drivers’ compliance to safe behaviour, there were added benefits. First, the approach improved safety perception and attitudes of the drivers toward safety in their working environment. Second, using the BBS intervention approach in addition to worker safety training proved to be more effective in correcting the behavior of the drivers than those who received safety training only. From the Phase 2 data obtained at the company in Guangzhou 12 months after the withdrawal of the behavioural intervention it was concluded that while there were no significant changes in the improved safe driving behaviour of the drivers, the overall safety climate scores deteriorated. This result supports that BBS technique is effective in correcting unsafe behavior and the effects can be long lasting. However, there are factors missing from the discontinuation of the approach which may have a negative impact on the safety perception of employees. The important implication of this finding is that since most safe behaviour intervention strategies aim at changing the behavior of front line workers rather than that of management, only when they are applied to the behaviour of managers is there a potential for a greater and lasting impact on the safety culture of the organization. In pursuit of a sustainable cultural change in safety, organizations should go beyond the culture of compliance, and management behaviour should also be addressed together with the behavioural improvement of frontline employees. If the behaviour of leaders can be adjusted to ensure that they attend systematically to safety, the culture of the entire organization can be transformed as it is the behaviour of management that determines how the organisation functions and
whether an organisation exhibits the practices that are necessary to make up a culture of safety.

The present research on the application of the behavioural approach to improve driving behavior is believed to be the first of its kind in China. There is one important methodological improvement compared to that of earlier studies in this area. Although there is ample evidence that the BBS intervention approach has a positive impact on the safety perceptions of employees in an organization, previous studies have been limited to the changes of safety perceptions before and after the implementation of the BBS program. No published research has re-examined the employees’ safety perceptions of an organization after the BBS program has been discontinued for a period of time in the workplace.

It can be concluded that a behavioural-based intervention approach to safety is important and has a positive influence on the promotion of safe driving behavior and the safety perceptions of employees in an organization. It is hoped that this research will inspire further research as well as the adoption of a behavioural intervention approach in China to help reduce its persistently high rates of occupational accidents and injuries.

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