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The impact of safety climate on safety related driving behaviors



Kwesi Amponsah-Tawiah, Justice Mensah*

Department of Organization and Human Resource Management, University of Ghana Business School, P.O. Box LG78, Legon Accra, Ghana

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ABSTRACT

This study explored the impact of safety climate, age and tenure as a driver on safety related driving behaviors among 290 company drivers in Ghana. The study found a negative relationship between safety climate and studied work-related behaviors: speeding, rule violation, inattention and driving whiles tired. The study also found that age significantly predicted the extent to which drivers engaged in safety related driving behaviors. The results showed that young drivers (aged 20–35 years) engage more in risky driving behaviors relative to adult drivers (aged 36–60 years). The study also found that the tenure of a driver did not significantly affect work-related triver behaviors. The findings from this study suggests that in the quest to reduce safety related traffic accidents and its resulting consequences such as injuries, absenteeism and deaths, a critical organizational variable that organizations can use to mitigate this canker is commitment to and strict adherence to safety practices and enforcement of safety regulations and policies among others can help the country win the battle against road accidents.

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1. Introduction

The spate of road accidents in the World in recent years leaves much to be desired. Road accidents have become an international canker eating deep into the core fabric of peoples' lives. According to the World Health Organization (2013), injuries resulting from road accidents are significant causes of deaths worldwide. Globally, the risk of dying through road accidents is estimated at 18 per 100,000 population, 10.3 per 100,000 population in Europe and 24.1 per 100,000 population in Africa (World Health Organization, 2013). Road accidents are the leading cause of deaths and injury among adults and adolescents in Ghana (National Road Safety Commission [NRSC], 2008). Road traffic accidents accounted for 237,289 casualties, including 25,585 fatalities, 84,936 serious injuries, and 126,782 minor injuries from 1991 to 2008 (National Road Safety Commission [NRSC], 2008). The Commission further reported that 43% and 53% of road traffic accidents in Ghana involved pedestrians and occupants of cars respectively. The NRSC further asserts that over speeding is the major cause of road traffic accidents in Ghana and accounts for about 60% of road traffic accidents in Ghana (Vibe Ghana, 2013). The cost of road traffic accidents to Ghana's economy is estimated at GHS 948,224 million, representing 1.6% of Ghana's annual Gross Domestic Product (GDP) (Ghana News Agency, 2013).

The World Health Organization (ibid), chap. 2 also report that work-related road accidents are significant causes of deaths at the workplace. Work related road accidents leading to deaths in the United States accounts for about 35% of all work-related accidents and injuries (National Center for Statistics & Analysis, 2002). Road traffic accidents in the European Union

* Corresponding author. E-mail addresses: kwesi.amponsaht@googlemail.com (K. Amponsah-Tawiah), justmens87@gmail.com (J. Mensah).

http://dx.doi.org/10.1016/j.trf.2016.04.002 1369-8478/© 2016 Elsevier Ltd. All rights reserved. are estimated at 41% of all work related accidents (European Commission, 2002). According to Haworth, Tingvall and Kowaldlo (2000) significant proportions of work related deaths, injury and absence are as a result of road accidents. These statistics suggest that one critical concern of organizations today should be on how best to achieve safe driving for its drivers (Murray, Newnam, Watson, Davey & Schonfeld, 2003). Organizational influences such as workplace safety or the safety climate of an organization affects the safety behaviors of employees. Poor organizational safety practices such as time pressures, higher work pace and excessive workload have been identified as a contributing factor to both workplace injuries and accident and unsafe work behavior (Brown, Swerdlow, Schomker & Smith, 2000; Christian, Bradley, Wallace, & Burke, 2009).

Driver demographics (such as age, tenure as a driver and level of education) have also been found to predict unsafe driving behaviors (Mebrahtu, 2002; Misganaw & Gebre-Yohannes, 2011; Tulu, Washington, & King, 2013). Newnam, Mamo, and Tulu (2014) findings on driving behavior across age and years of education of taxi drivers in Addis Ababa, Ethiopia, as well as Mamo, Newnam, and Tulu (2014) findings on organizational predictors of work-related driving crash involvement in Ethiopia provides the basis for further interrogations of work-related driving behaviors in Ghana since the canker of road accidents in Ghana is rife (Ghana News Agency, 2013). The specific driving behaviors being explored in this study include speeding, inattention, rule violation and driving while tired.

Despite the consequences of unsafe driving globally, there is a paucity of literature examining the influence of safety climate and driver demographics as predictors of work-related driving behaviors (speeding, rule violations, driving while tired, and inattention) in Ghana. This lack of relevant literature presents gaps in existing literature in terms of practice, theory and knowledge since empirical based intervention is needed to help organizations in Ghana as well as the NRSC of Ghana address the canker of road traffic accidents and its resultant injuries and deaths. This study therefore seeks to;

- Examine the influence of safety climate of organizations on safety related behaviors of a population of company drivers in Ghana.
- Explore differences in safety related driving behaviors across age groups and number of years as a driver.

1.1. Safety climate

Safety climate is a dimension of organizational climate. The safety climate of an organization is the set of perceptions and expectations employees have about how safe their organization is (Griffin & Neal, 2000). Safety climate has also been conceptualized as being a component of organizational climate, indicating that it exemplifies a sub-climate that reflects how employees perceive an organizations safety practices and culture (Hayes, Bartle, & Major, 2002; Neal, Griffin, & Hart, 2000), hence seen as a measurable marker of the safety culture of an organization (Huang et al., 2013). Employees perceptions of the prevailing safety climate in their organization tend to influence their behaviors at work, particularly safety behaviors. Safety climate predicts safety behavior and safety outcomes (such as accidents and injuries) at the workplace (Beus, Payne, Bergman, & Arthur, 2010; Christian et al., 2009). The literature suggests an organization's safety climate is associated with accident occurrences (Diaz & Cabrera, 1997; Varonen & Mattila, 2000) and the frequency of occupational accident involvement (Mearns, Flin, Gordon, & Fleming, 1998; Mearns, Whitaker, & Flin, 2003).

Zohar and Luria's (2005) multilevel model of safety climate assumes that; first, employees are constantly faced with irreconcilable and ambiguous demands from management and immediate supervisors. Second, policies and regulations are developed by management; however the implementations and interpretations of these policies and regulations are executed by supervisors. Most often, in the interpretation of management's mandate, supervisors exercise a great deal of flexibility leading to incongruence among supervisory groups (Zohar & Luria, 2005). The implications thereof from these assumptions are that, in the face of competing demands, employees and supervisors will select highly prioritized behaviors in the organization. Thus, employees are likely to choose safe behaviors if safety is highly prioritized in the organization or select speed when faced with competing demands if productivity is highly prioritized over safety. Thus, the decision for drivers to engage in safe driving behaviors when faced with competing and conflicting demands is based on the extent to which organizations prioritize safety.

1.2. Safety related driver behaviors

Researches over the years have identified key behaviors that are work-related. Salminen and Lahdeniemi (2002) report that, drivers have themselves identified four factors that are work-related driving risks. These are time pressures, thinking about work, tiredness, and use of mobile telephones while driving (Salminen & Lahdeniemi, 2002). Lack of focus whiles driving has also been identified by Downs, Keigan, Maycock, and Grayson (1999) as a risk factor in driving. To Williamson (1997), alcohol use, long or irregular working hours, peaks in workload, and fatigue are the causes of work-related accidents. Stradling et al. (2000) identifies speeding resulting from time pressure as being more pervasive among company drivers. The use of mobile phone(s) whiles driving have also been found to lead to road accident and injury risks (Laberge-Nadeau et al., 2003). Rhodes and Pivik (2011) found that younger drivers reported engaging in risky driving behaviors more frequently than older drivers. Wills, Watson, and Biggs (2006) also found age to predict work related driver behaviors. Ivers et al. (2009) have also found that new drivers or novice drivers engaged more in risky driving behaviors related to drivers who have driven for longer period of time.

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