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Causes Of Kuwait's Traffic Fatalities

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Abstract
Kuwait is a country with high vehicle ownership; in the second half of the 1990s there were between 350 and 450 vehicles per 1000 population, a value similar to OECD countries. In any given year, traffic fatalities per 10,000 vehicles are usually found to be lower for countries with higher vehicle ownership. Similarly, in a given country, fatalities per 10,000 vehicles are found to decrease over time as vehicle ownership increases, and this is the experience of Kuwait. However, its fatality rate is much higher than in the case for countries with similar vehicle ownership. The purpose of this paper is to attempt an explanation for the high fatality rate. The high rate is puzzling because Kuwait scores well on many factors which should reduce the fatality rate. Kuwait has the same or more phyisians and hospital beds per 1000 population than other countries with similar vehicle ownership. The roads are constructed to high standards, with all arterial roads being divided. A higher proportion of total travel in Kuwait is done on freeways than is typical of OECD countries, which should lower the fatality rate. Driver licensing standards are also similar to OECD countries, and the average age of vehicles is lower. Weather conditions and terrain should support safe motoring. Alcohol, which is still implicated in a high share of fatal crashes in OECD countries, is not a factor. There is a higher proportion of young drivers in Kuwait than in the OECD, but on the other hand, the share of elderly drivers is very small. The major reason for the high fatality rate in Kuwait was found to be speeding, reckless driving and poor driving discipline. Only a fraction of the daily traffic violations in Kuwait are detected by the enforcement officials. It was found that an average of 9.9 violations per trip including those of going through red lights were absent from the official traffic statistics. A second reason is driver distraction, for example from mobile phones.

Introduction

According to World Health Organization, as of 2019, 1.28 million deaths per year were attributed to road traffic accidents (RTAs), which are the world's twelfth biggest mortality killer overall throughout all age categories (Gasana et al., 2022). Road traffic injuries (RTIs) are a significant global source of death, disfigurement, and financial damage. In certain Middle Eastern high-income nations, there have been exceptionally high traffic-related fatalities rate compared to other high-income nations. For instance, early figures by Farghali (2012) clarified that the figures provided to the UAE interior ministry from 2006 to 2009, road incidents occurred in the country in which approximately 37108 incidents occurred, leaving 3971 people dead among which 889 were civilians (45522 injuries) and 11,281 injured residents.

Kuwait has undergone fast expansion and a rise in vehicles in recent decades, leading to a significant increase in traffic fatalities, especially among young individuals (Aldhafeeri *et al.*, 2018). 64.4% of Kuwait's 4886 documented unintentional fatalities that were submitted to medical-legal review between 2003 and 2009 were caused by RTAs (Al-Kandary and Al-Waheeb, 2015). According to Aldhafeeri *et al.* (2018), Kuwait experienced 11,591 non-fatal RTAs between 2000 and 2009, among which 28.2% were severe, and 3892 were catastrophic. Most RTI-linked fatalities were observed to be in men (87.3%) between the ages of 20 and 59 (70.8%). Road accidents are the second-leading cause of Kuwait's mortality and disability-adjusted life years (DALYS) as of 2019. On November 16, 2019, a collision on Wafra road resulted in the death of a Kuwaiti citizen and 9 other injuries. The injured people ranged in age from twelve to seventeen. Five people were hurt in a bicycle crash on Sheikh Jaber Causeway that day (Kuwait Times, 2019).

Despite their significance, these occurrences do not reflect the only loss brought on by RTIs; there is According to the Kuwaiti National Transport and Traffic Sector Strategy 2009-2019, the expense of traffic congestion and accidents to the country over that time period is estimated to be 27.430 billion (KD), or almost 6% of GDP (Al-Salehalso the economic effect of the losses (Al-Zamanan *et al.*, 2018). In 2012, the total cost of traffic accidents in Kuwait was over 789,401,400 KD, with a collision cost ratio of 9121 KD/crash (Al-Rukaibi et al., 2020). Additionally, it was determined that the price of a personal tragedy was 276,203,532 KD, the price of a car accident was 36,560,898 KD, and the price of a collision in general was 476,637,008 KD (Al-Rukaibi et al., 2020). Additionally, Al-Rukaibi et al., (2020) revealed that among the six Kuwait governorates, Al Asimah's expense of traffic accidents was the greatest., A. 2018).

In a study by Al-Zamanan *et al.* (2018), the fact that RTIs are the leading cause of mortality in young people (under twenty) and inflict the most significant tragedy on Kuwait's expanding youthful population, which views its youth as the nation's future strength pillar, heightens the gravity of the matter. Therefore, it is required to investigate the traffic issue using analytical, statistical, and qualitative research to identify the primary root causes of the problem in all of its linked aspects.

Empirical Analysis

Despite having excellent traffic and road infrastructure, Kuwait has one of the highest fatality rates per capita compared to

several other GCC nations. The many facets of Kuwait's traffic issues have been analyzed, and their origins have been examined. In a study by Al-Mutairi and Koushki (2009), they examined Kuwait's fatal auto accidents with the primary objective of identifying the epidemiological characteristics of these events and create a benchmark for subsequent analysis. This study examined incidents that occurred between 1977-1998. The scholars discovered that the figures are more significant than certain developed nations. This survey also revealed that nearly 25% of all car accidents included drivers under fifteen years. Al-Saleh (2018) looked at the relationship between distractions, both within and outside the automobile, and the elevated likelihood of injury in car accidents among motorists of all ages. The findings indicated that motorists of all ages are more vulnerable to distractions within the car than those from the outside world. Finally, a study by Ratrout (2005) at the Kuwait Institute for Scientific Research connects the volume of incidents that occur during the daytime.

Nevertheless, the early evening and afternoon hours saw the highest incidents. The study also demonstrated that there are now more fatalities due to poor ecological parameters. Numerous stations placed in various areas allow for the detection of the effect of traffic sources on air pollution levels pollutants, providing the findings of 7 years of data from three Kuwaiti pollutant monitoring sites. They assessed pollutant levels during periods of high traffic. Data analysis revealed a modest rise in air pollution, particularly in areas closest to the metropolis.

Numerous pieces of research have clarified the causes of these dramatically higher incidences of RTIs among high-income nations in the Gulf Cooperation Council (GCC). Lacking seat belt usage, excessive speeding, inattentiveness, and improper automobile maneuvering were the leading causes of accidents that culminated in fatalities or serious injuries (Mansuri *et al.*, 2015). According to investigations from Kuwait, a lack of respect for current traffic laws and regulations, driver negligence, and weak licensing requirements are the leading causes of fatal road injuries (Al-Bulushi *et al.*, 2015). In the past ten years, Kuwait has launched several initiatives aimed at enhancing roadway safety, including the adoption of a safety belt legislation, the introduction of a punitive scoring system, more significant investment in video surveillance, and involvement in the WHO Decade of Road Traffic Safety (Koushki, Bustan and Kartam, 2003). Notwithstanding this, research from Kuwait revealed that human elements, such as reckless driving habits, remain the primary causes of traffic collisions causes in the nation (Al-Mutairi and Koushki, 2009). However, the country has little execution of traffic laws.

An article by Markkula (2015) examined the impact of safety belt usage on fatal automobile accidents in the context of Kuwait's 1994 belt law. The statistical examination of data from more than 1200 crash victims revealed that adopting seat belts has significantly decreased road traffic injuries and fatalities. In addition, the usage of seat belts, driving while smoking, and traffic incidents involving teenage drivers in Kuwait were all investigated. A population of 1467 youth drivers were chosen randomly and interviewed in Kuwait using a survey questionnaire (Al-Hemoud and Al-Asfoor, 2006). The study revealed that women tend to drive more safely than young men and that driving smokers utilized seat belts less frequently and had a greater likelihood of car crashes. The driver's conduct is strongly related to their driving skills and is influenced by the society of the area where the driver lives. Other research has discovered that this correlation can be both beneficial and harmful. For example, Al-Hemoud and Al-Asfoor (2006) have found that drivers' lack of education impacts their social and driving behavior patterns.

Injuries and fatalities among migrant workers are higher due to several factors, such as the different driving laws and practices in their native countries and the lax oversight of these laws. Compared with local employees, most migrant workers hold positions that do not fit their job description and frequently put more time at riskier employment in the manufacturing, service, and labor sectors (Mucci *et al.*, 2018). Non-Kuwaiti men work in potentially dangerous service vocations like taxis, public transportation, or delivery driving. According to some studies, negligence, and a lack of knowledge of traffic regulations, including traffic lights and warning signals, were to blame for migrant workers' RTIs in Thailand (Mucci *et al.*, 2018). To secure non-Kuwaitis and Kuwaitis on the roadways, immediate and efficient action is required.

The discoveries align with a previous by Akhtar and Ziyab (2013), which showed that the primary cause of citations was breaking the speed limit, which is consistent with other studies on the most frequent traffic incidents caused in Kuwait and GCC generally. The following most frequent reasons for issuing penalties in Kuwait were parking in handicapped or no parking zones, driving with an expired registration, and running red lights (Al-Mutairi and Koushki, 2009). This demonstrates how negligent drivers disregard current traffic laws and regulations. Failing to maintain a safe distance from the automobile in front of you or tailgating is a prevalent unsafe driving practice among Kuwaiti drivers, which is not mentioned among the offenses that result in fines (Almutairi *et al.*, 2021). According to research by Al-Hemoud, Simmons and Al-Asfoor (2010), an 85% of Kuwaiti drivers maintain trailing distances of under two cars' length on motorways. According to studies conducted in Kuwait, 30.4% of car crashes involve a rear-end collision (Markkula, 2015). Even in Kuwait, where speeding is expected and when meteorological conditions like dust, fog, and storms can limit visibility on highways, thus contributing to car crashes, tailgating is a huge cause of accidents and ought to be grounds for citation.

Throughout the years, men received more citations than women overall. This is understandable given the factual scientific data demonstrating that men have more propensity to partake in risk-taking activities such as speeding, crossing red lights, road racing, driving with no license, and driving in hazardous conditions (Sabbour and Ibrahim, 2010). In Kuwait's youthful populace, female drivers tend to be safer compared to their young men equivalents, who smoke while driving, do not fasten seatbelts, and have a greater risk of traffic fatalities according to Jiménez-Mejías *et al.* (2014). More precisely, men exhibit a more significant proportion of indirect referrals compared to women. It is essential to remember that indirect tickets are given to the Civil ID listed on the vehicle's registration. Some vehicles might be under the registration of the dads or brothers of the female drivers. As a result, some statistics could be exaggerated, particularly when more indirect citations, such as through security cameras, are given indirectly (Jiménez-Mejías *et al.*,

2014). The direct technique reveals an even more significant gap, with men receiving 4.5 times more citations than women. Lost chances to execute traffic laws against Kuwait female drivers are probably prevalent. Compared to privately leased automobiles, firm-contracted vehicles receive fewer infractions. Male non-Kuwaitis employed by public and/or private enterprises in Kuwait typically operate these automobiles.

Similar findings were made by research carried out in Qatar by Bener (2012), which discovered that youthful drivers between the ages of 25 and 34 had the most significant RTIs frequency (35%). RTIs affected more males than women, with a 1.4: 1 (P=0.001) incident ratio for each group. A significant number of the wounded drivers had a history of moving infractions within the year, particularly driving offenses like speeding (36.1%) and parking offenses (18.1%). Overall, drinking or eating distracted 27.9% of the wounded drivers, whereas using a phone 25.4% of the time. Overturn slide accidents (20.7% of all incidents among Qatari drivers) trailed by collisions with stationary objects (15.1%), accounting for most crashes. With a cumulative proportion of 31.8% of all documented injuries, those hurt by both heavy and light vehicles recorded the highest frequency of head trauma.

Conclusion

The study has determined the key factors that influence RTAs grounded on the startling statistics of road traffic fatalities. With the problem of road fatalities being to some behavioral aspects, there is a need to come up with remedies to address the fatalities. Thus, harsher punishments may be necessary to improve road safety in Kuwait. Furthermore, to lower collision rates, it is also essential to set up GDL networks for youthful drivers and undertake road safety awareness initiatives. According to research, traffic fatalities is closely associated with a country's income bracket. Low-income nations have high fatality rates compared to high income nations. In contrast, some Middle Eastern high-income nations have exceptionally high traffic-related fatalities rate compared to other high-income nations. In Kuwait youthful population, female drivers are safer compared to their young men equivalents.

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