

**MALAYSIAN JOURNAL OF PUBLIC HEALTH MEDICINE
(MJPHM)**

EVALUATION FORM

Title: Road Traffic accidents in Nineveh Province (2017_2021): A retrospective study
Ref No: 15656-1

Kindly fill in this form as accurate as possible. Thank you for your kind cooperation.

TOPIC/SECTION	ACCEPTABLE*	COMMENTS+
Title	v	
Abstract	v	Objective is unclear
Introduction	v	Improve the English
Methodology - Population - Sampling & Sample - Data Collection - Data Analysis - Definition	v	Sampling unclear Data analysis unclear
Results - Descriptive - Analytic / Hypothesis - Testing - Data Presentation = Tables, figures etc	-	You must add table comments and images with narration that can clarify the image, for example the smallest, the largest, the trend increases or decreases or remains and so on
Discussion - Magnitude/Consistency - Cause-effect relationship - Bias / Limitation	v	Try to show the results by counting the incidence of RTA in men compared to all male riders, do it with women as well. The calculation will show the RTA of each gender add your opinion
Conclusion	v	Add by policy implication
References - Format MJPHM	-	Improve and use at least 5 years ago

• * Tick ✓ if Yes and X if No

-
- + Give your expect opinion on the matter, use separate sheets if necessary

Detail Comments (please advise the authors on how to improve their paper)

Major revision.

Write consistently from the goal, finding, discussion and conclusion.

RECOMMENDATION (tick ✓)

= Accepted for publication (with minor corrections)

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= To be resubmitted

= To be rejected

SIGNATURE



(Dr. Tri Siswati)

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Abstract:

Traffic accidents are severe public health issues that cost individuals, families, and societies a lot of money. The objective of the article is to know the Road Traffic accidents in Nineveh Province during (2017_2021). The study was a retrospective conducted in Nineveh province for a five year period 2017-2021. Nineveh is the two big cities in Iraq region after Baghdad, with about four million lives. The period of study started from April. 6st 2022 throughout June 22th 2022. The information was gathered from a variety of sources; it is the Nineveh Health Department through the records. In comparison to previous years, the study found that RTA casualties and fatalities increased by 12.7 percent and 54.9 percent in 2020. The bulk of injuries were caused by fractures in various regions of the body. The most common type of damage was a head injury (27.09 percent) ,followed by bruising (11.65 percent). The researchers determined that road traffic accidents have effects and that mortality is on the rise in 2020 compared to previous years. The most frequent sorts of repercussions were head injuries and lower limb fractures. The male preponderance was clear throughout, and accidents involving motorcycles were most common.

Keywords: Road Traffic accidents, a retrospective study

Introduction:

Traffic accidents are severe public health issues that cost individuals, families, and societies a lot of money¹. The term "road accident deaths" refers to deaths that occur during or within a month following a collision². As a consequence of enhanced automobile use, lifestyle changes, and riskier behavior, road accidents have become more prevalent among the wider populace³. As a result, In the United States, car accidents are the leading cause of mortality and disability⁴. In the developing world, fixing the harm caused by road accidents costs between (1- 3%) of total national revenue. The global annual rate of road traffic deaths is estimated to be around 17.4 per 100,000 people⁵. Probably owns just about 44% of the world's automobiles, is expected to rise from eighth to sixth place as the leading cause of death in low- and middle-income nations by 2030. According to statistics, Iraq's accident death rate is 30% people, compared to 33.5

globally, and 15% people injured in accidents in Iraq die, compared to roughly 2 in 100 in industrialized countries⁶. There isn't a day that passes without RTIs occurring somewhere on the planet, killing or injuring a large number of people. In many cases, the entire family is destroyed. People in their prime working years are unjustly harmed or killed. Because they are largely pedestrians, cyclists, and bus and minibus passengers, poor people endure a disproportionately high incidence of injuries and fatalities⁷. More research on the epidemiological pattern of RTIs in poor and middle-income countries is needed to address the scope of the RTI problem and vulnerable road users, according to a World Health Organization (WHO) report. Iraq has one of the highest RTI fatality rates of any country. Due to the lack of a comprehensive national injury surveillance system in Iraq, RTI epidemiological measures are very variable^{8,9,10,11}. High incidence of serious RTAs have been documented in Iraq and other surrounding countries. The United Arab Emirates and other Gulf countries have seen a steady growth in RTAs^{12,13,14}. Following the war and the regime's collapse in April_2003, there was a massive increase in imported cars in Iraq. This was largely due to the relaxation of restrictions governing the importation of secondhand cars, which were brought in with little or no taxation or other safety requirements. As a result, doctors and traffic cops were concerned about a projected increase in RTAs. According to the most recent WHO data from 2020, road traffic accidents killed 10,726 people in Iraq, accounting for 7.32 percent of all deaths. Iraq ranks 37th in the world with an age-adjusted death rate of 34.41 per 100,000 people. In this context, identifying epidemiological trends in road traffic accidents in Nineveh Province is critical in order to gain a better knowledge of how to reduce various types of RTIs. During the period 2017-2021, the current study explores several epidemiological aspects as well as road traffic accidents in Nineveh Province.

Methodos:

The research was carried out in Nineveh province over a five-year period, from 2017 to 2021. With a population of almost four million people, Nineveh is the second largest city in the Iraqi area after Baghdad. The study period began on April 6th, 2021, and ended on June 22nd, 2022. The information was gathered from primary sources, including the Nineveh Health Department's records. Normally, the Department of Health in Nineveh Governorate collects all victims of road traffic accidents in Nineveh Province. A data sheet was created specifically for this study, containing all of the

variables required to meet the study's objectives. The client's demographics, the nature and location of the injury, and the clinical outcome are all aspects to consider. The data were categorized, assessed, and presented in tables using frequency and percentage. We also lacked critical demographic information and death circumstances, which would have allowed for a more full and useful assessment of these occurrences in this study.

Results:

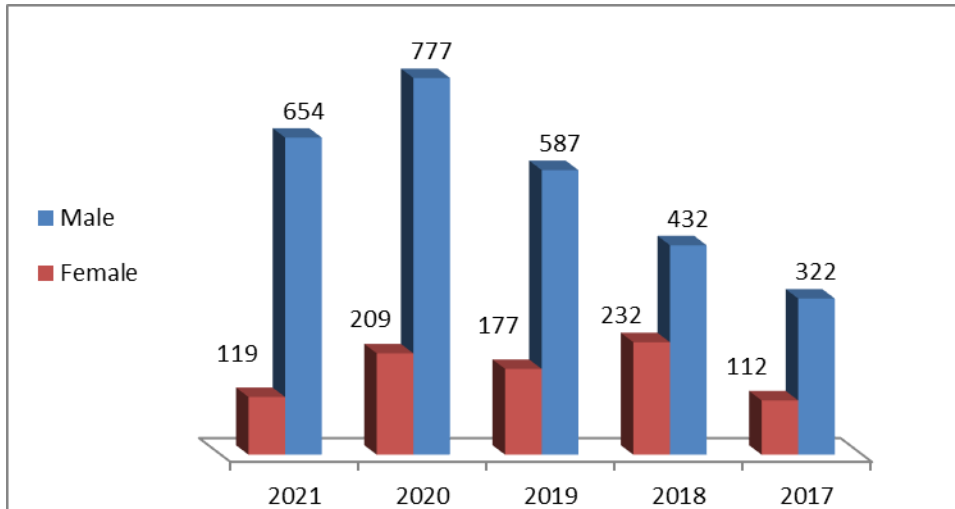


Figure 1 shows the gender breakdown of RTA casualties in Nineveh Province (2017-2021)

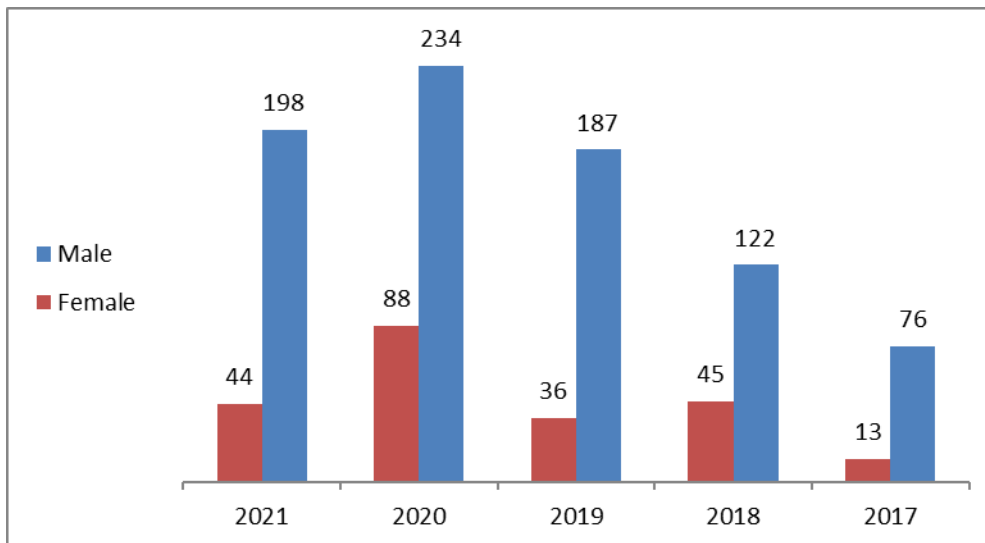


Figure2: Distribution of RTAs deaths by gender in Nineveh Province (2017-2021)

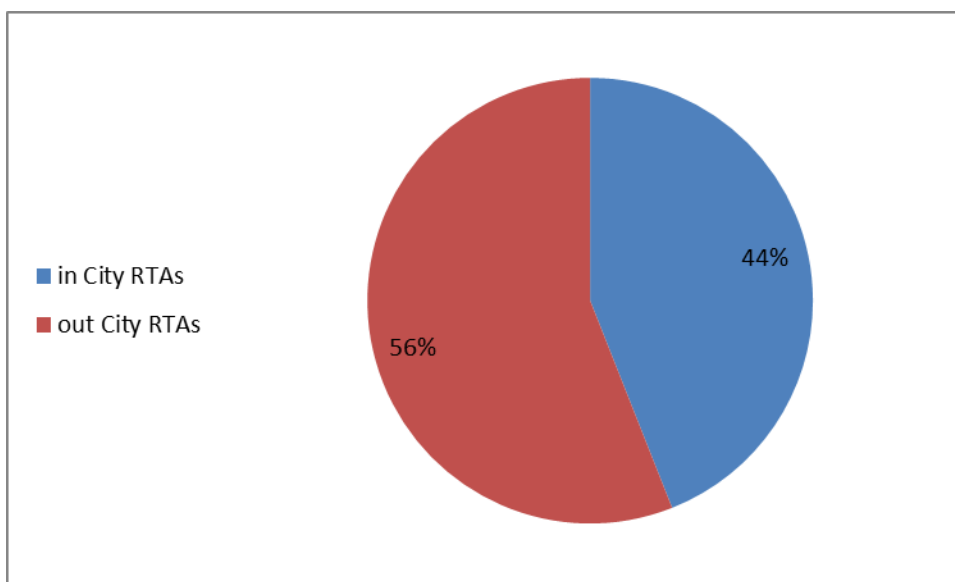


Figure3: Distribution of RTAs by Residential District in Nineveh Province (2017_2021)

Table 1: Causes of Road Traffic accidents in Nineveh Province between 2017 to 2021

Type of RTAs	2017	2018	2019	2020	2021
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Small cars	117(26.95%)	203(30.57%)	292(38.22%)	318(32.25%)	179(23.15%)
Cars carry	98(22.58%)	148(22.28%)	93(12.17%)	199(20.18%)	166(21.48%)
motor cycle	208(47.93%)	298(44.88%)	351(45.95%)	379(38.43%)	407(52.66%)
Others	11(2.53%)	15(2.25%)	28(3.66%)	90(9.12%)	21(2.71%)
Total	434(100%)	664(100%)	764(100%)	986(100%)	773(100%)

Table 2: Types of accidental among clients in Nineveh Province between 2017 to 2021

Type of accidental	2017	2018	2019	2020	2021
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
head injury	83(19.12)	112(16.87)	207(27.09)	298(30.22)	250(32.34)
Spine fracture	42(9.68)	96(14.15)	77(10.07)	70(7.1)	81(10.47)
Lower limb fractures	67(15.44)	78(11.75)	55(7.19)	110(11.15)	66(8.54)
Upper limb fractures	51(11.75)	88(13.25)	67(8.77)	119(12.07)	73(9.44)
Pelvic injury	22(5.07)	19(2.86)	38(4.98)	76(7.7)	17(2.2)
Multiple fracture	38(8.76)	74(11.15)	87(11.39)	66(6.69)	29(3.75)
Abdominal injury	34(7.84)	66(9.94)	79(10.34)	81(8.21)	90(11.64)
Chest injury	39(8.98)	53(7.98)	56(7.32)	40(4.06)	33(4.27)
bruising	48(11.05)	70(10.54)	89(11.65)	103(10.44)	89(11.51)
Others	10(2.3)	8(1.2)	10(1.3)	23(2.33)	45(5.83)
Total	434(100%)	664(100%)	764(100%)	986(100%)	773(100%)

Discussion:

Males suffered far more casualties and deaths than females, according to the study. Due to the low number of female drivers on the road, this is the case. Young males driving together are also more likely to have an accident, especially if they are under the influence of alcohol. Turkey and other countries have reported similar outcomes¹⁵. A research on road traffic accidents was also done in Iraq, among the victims, the male to female ratio was 4:1.^{16,17,18} According to previous studies, man were more likely than woman to be involved in deadly motorcycle traffic accidents^{19,20,21,22}. The male-to-female ratio was estimated to be at 3:1. The majority of the injuries were serious, with head injuries and lower limb fractures accounting for over two-thirds of all fatalities, according to the report. In Iraq's governorate, similar findings were discovered. Over the course of our five-year investigation, we noticed a rising trend in motorcycle deaths. In the same way as other investigations^{23,24,25}. Motorcyclists died more frequently from head trauma, which was the major cause of deaths. In addition, just 37.4 percent of bike crash fatalities wore helmets at the time of the disaster, while the majority of casualties (62.6 percent) did not. According to our findings, vehicle crashes caused the majority of fatal motorcycle accidents (76 percent), this is consistent with prior global research that show motorcycle-vehicle crashes are the major cause of road casualties²⁶. In the UAE, for example, colliding with a moving vehicle caused 47 percent of motorbike accidents, which were then followed by turnover (41 percent). Furthermore, private cars and large vehicles were the most common types of vehicles that motorcycles collided with. This finding is in accordance with a research conducted in Northern Iran, which indicated that 66.5% of motorbike injuries were caused by a collision with a car^{27,28,29,30}. Our findings revealed that the outside city had a greater rate of fatal crashes than the city's core. This could be owing to the fact that motorbike riders in the suburbs travel faster than those in the city. Charkazi et al study's in Kuwait, as well as Charati et al study's in Mazandaran province^{31,32,33}. The majority of accidents in this age range occurred as a result of traffic, infractions, as well as the use of prohibited substances They also have little faith in their own driving ability, refuse to wear a seatbelt, and are indifferent about the dangers they are directly causing. Furthermore, young people are more likely to be inexperienced drivers. More than half of the casualties were guys, according to the findings of this investigation, and men were involved in four times as many traffic incidents as women. This discovery was in line with the findings of a prior study conducted in Iran^{34,35}. More

accidents occurred in young persons in a study in Iran, which is consistent with our findings³⁶⁻⁴⁰.

Conclusion:

The researchers determined that road traffic accidents have effects and that fatalities are on the rise in 2020 compared to previous years. The most common sorts of consequences were head injuries and lower limb fractures. The male preponderance was clear throughout, and motorcycles were the most common cause of accidents.

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Conflict of interests:

There are no declared conflicts of interest by the authors.

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