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LETTER To EDITOR

"Moving Towards Safety, Necessity of the 'Say No to Accidents' Campaign": Accident-related Mortality in Southern Khorasan Province (Iran) in 2023

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Dear Editor

Given the importance of causes of death for health decision-making, we conducted a study in 2023 to investigate the causes of death in Southern Khorasan Province in Iran. The data were obtained from the "death registration system" maintained by the Health Deputy of the Birjand University of Medical Sciences, Iran.

The four leading causes—cardiovascular diseases, cancers and tumors, diseases of the respiratory system, and road traffic injuries (RTIs)—accounted for 73% of deaths in Southern Khorasan province in 2023. Notably, road accidents alone represented 6.5% of total deaths in the province. It is important to highlight that the average age of those who passed away is approximately 40 years, with approximately 76.5% being males (Figure 1).

According to a study conducted by Pirayesh et al. in 2023, the fourth most common cause of death before the COVID-19 pandemic was accidents, and it was fifth during this pandemic in Southern Khorasan. In addition, between the most common causes of death according to different age groups before and during the COVID-19 pandemic, accidents were the most common cause of death in both periods from the age of 5 to 44 years (1). The study conducted by Kazemi et al. in 2014, which examined accident-related mortality in Southern Khorasan province in 2010, indicates that 16.7% of 3792 deaths were caused by accidents. Males made up 73.6% of the deaths caused by accidents. It is important for authorities to take prompt action to detect and avoid the causes (2). Despite a decrease in deaths in 2023 compared to 2014, deaths from accidents are still common at young ages, and it highlights the need to focus on all age groups, particularly the causes of death among youth.

Accidents are the leading cause of death for these people in the majority of developing nations (1).

Statistics and data on the population's mortality rate are important requirements for every society's health-related planning (3). Road traffic injuries (RTIs) are highest among those aged 5 to 29 and are the eighth most common cause of mortality worldwide for all age groups. RTIs cause up to 50 million injuries and about 1.4 million deaths annually. Pedestrians, cyclists, and motorcyclists are among the vulnerable road users who are responsible for almost half of these fatalities (4). According to the WHO, an accident is any unanticipated, unplanned incident that has the potential to cause harm (3). In 2018, 3,400 people died every day as a result of traffic-related accidents worldwide, making RTIs and

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road traffic mortalities (RTMs) one of the major public health concerns worldwide (5). Although many efforts like the United Nations General Assembly's 2010 Global Decade of Action for Road Safety and the United Nations' 2016 Sustainable Development Goals include road safety, future estimates of global mortality suggest that the programs' objectives will not be fulfilled (5). These injuries remain one of the world's major causes of mortality and disability (6). Between 1% and 3% of a nation's yearly GDP is lost due to traffic accidents (4). It is projected that between 2015 and 2030, road injuries will cost the global economy US$1.8 trillion (7).

Low-income and middle-income countries (LMICs) account for more than 90% of the 1.35 million RTI-related deaths that occur globally each year (6). Most fatal and non-fatal traffic injuries occur in these countries. Low-income countries (HICs) have a threefold higher risk of road traffic fatalities than high-income countries (4). Significant economic and social costs, as well as high rates of death and disability, are imposed on people worldwide by these occurrences, particularly in developing nations (8). In 2030, traffic accidents are expected to rank as the fourth most common cause of disease worldwide (9). The quality of life is diminished by the physical, psychological, and financial repercussions of traffic accident deaths, which also impact the victims' families and the larger community (10).

In Iranian society, traffic accident is considered a significant burden, accounting for a greater number of years of life lost (YLL) than other causes of death (11). After cardiovascular diseases, road accidents rank as the second most common cause of death and YLL in Iran. Additionally, there are 31 road accident deaths per 100,000 people, which is significantly higher than the global average (12). According to a report by Askarishahi et al. that examined the pattern of road accident deaths in Iran during 12 years from 2006 to 2017, the majority of accident fatalities were males (13). In the present study, according to the mortality registration system statistics, road accidents alone represented 6.5% of total deaths in the province, with around 76.5% being males. (Figure 1)

A study by Seid et al. found that victims' mortality is significantly predicted by age, highlighting road accidents as a critical public health issue. Immediate treatment and prevention measures are essential to reduce morbidity and mortality rates (14). Emphasis should be placed on injury prevention among those aged 15 to 44, as this group often contains active workers who contribute to the economy. Their injuries lead to considerable social and economic repercussions, potentially pushing families into poverty, particularly in low- and middle-income countries. In Iran, individuals in this age range account for nearly 50% of road traffic accident fatalities, making their deaths detrimental to life expectancy and posing challenges to the economy and healthcare system (15).

Iran still has numerous challenges in preventing traffic accidents. Traffic accidents have increased over the past 20 years due to the increasing manufacture of automobiles, which has not been matched by advancements in other areas of injury prevention, such as behavioral and environmental modifications (3).

According to a study by Vecino-Ortiz et al., within the context of a safe systems approach, four key risk factors consistently elevate the population-level risk for road injuries and fatalities: speeding, impaired driving, helmet usage, and the use of seat belts or child restraints. While there are several other contributing factors to road injuries and fatalities (e.g., infrastructure), these four risk factors have a measurable impact on road mortality and morbidity. For this reason, the World Health Organization (WHO) recognizes these risk factors as part of a comprehensive systems approach to road safety (4).

In order to reduce traffic fatalities, it is essential to implement measures that enhance road safety, improve vehicle quality and safety, and enforce strict penalties for traffic law violations. Additionally, better and faster services for victims can be achieved through increased collaboration among various agencies, including the police, fire department, and emergency medical services (2).

Recently, the "No to Accidents" campaign has been launched as a national initiative to promote safety and decrease road accidents nationwide. This campaign emphasizes community involvement and collective responsibility for road safety, aiming to foster a safe driving culture and encourage adherence to traffic laws. However, it is crucial to thoroughly consider multi-faceted approaches in planning for safety enhancement and reduction of fatalities.

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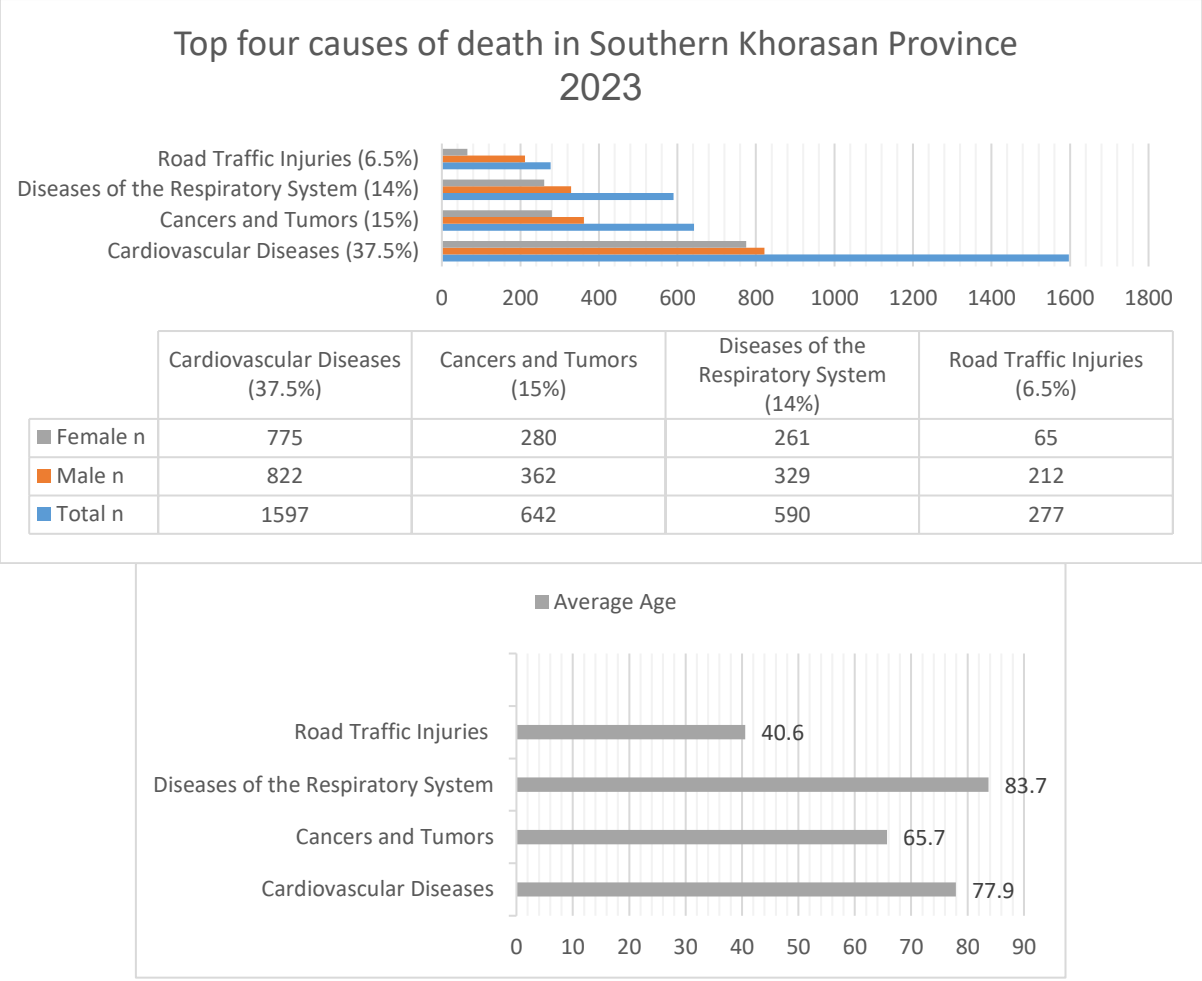

	Cardiovascular Diseases (37.5%)	Cancers and Tumors (15%)	Diseases of the Respiratory System (14%)	Road Traffic Injuries (6.5%)
Female n	775	280	261	65
Male n	822	362	329	212
Total n	1597	642	590	277

Figure 1. Four Leading Causes of Death in Southern Khorasan Province in 2023 (Upper Section) and the Average Age of Affected Groups (Lower Section)

Conflict of Interest

The authors declare no conflict of interest.

References

1. Pirayesh Z, Riahi SM, Bidokhti A, Kazemi T. Evaluation of the effect of the COVID-19 pandemic on the all-cause, cause-specific mortality, YLL, and life expectancy in the first 2 years in an Iranian population—an ecological study. *Front Public Health*. 2023;11:1259202
2. Kazemi T, Amouzeshi A, Borna N, Sharifzadeh GR, Amouzeshi Z. Accident-related mortality in Southern Khorasan Province in 2010. *J Surg Trauma*. 2014;2(2):63-66.
3. Nikbakht HA, Farajpour F, Farhadi Z, Hashemi SN, Jahani MA. Analyzing the trend of mortality due to traffic and nontraffic accidents: a study in the north of Iran. Ann Med Surg (Lond). 2024;86(6):3242-3248.
4. Vecino-Ortiz AI, Nagarajan M, Elaraby S, Guzman-Tordecilla DN, Paichadze N, Hyder AA. Saving lives through road safety risk factor interventions: global and national estimates. Lancet. 2022;400(10347):237-250.
5. Delavary M, Kalantari AH, Mohammadzadeh Moghaddam A, Fakoor V, Lavallière M, Wilhelm Siebert F. Road traffic mortality in Iran: longitudinal trend and seasonal analysis, March 2011-February 2020. Int J Inj Contr Saf Promot. 2024;31(1):125-137.
6. Razzak JA, Bhatti J, Wright K, Nyirenda M, Tahir MR, Hyder AA. Improvement in trauma care for road traffic injuries: an assessment of the effect on mortality in low-income and middle-income countries. Lancet. 2022;400(10348):329-336.
7. Chen S, Kuhn M, Prettner K, Bloom DE. The global macroeconomic burden of road injuries: estimates and projections for 166 countries. Lancet Planet Health. 2019;3(9):e390-e398.
8. Mahdian M, Fazel M, Sehat M, Mohammadzadeh M, Akbari H. Years of life lost and mortality rate due to road traffic injuries in Kashan region, Iran, during 2012-2013. Biosci Biotechnol Res Asia. 2015;12(2):741-746.
9. Bazargan-Hejazi S, Ahmadi A, Shirazi A, Ainy E, Djalalinia S, Fereshtehnejad SM, et al. The burden of road traffic injuries in Iran and 15 surrounding

[DOI: 10.61186/jsurgtrauma.13.2.42]

countries: 1990-2016. Arch Iran Med. 2018;21(12):556-565.
10. Mansouri Jalilian M, Safarpour H, Bazyar J, Safi-Keykaleh M, Farahi-Ashtiani I, Khorshidi A. Epidemiology of road traffic crashes in Ilam Province, Iran, 2009-2013. BMC Res Notes. 2020;13(1):517.
11. Khatibi SR, Dinpanah H, Maajani K, Khodadost M, Khodadost B, Kakhki S, et al. The burden of road traffic injuries in the northeast of Iran: the result of a population-based registry. J Inj Violence Res. 2020;12(1):63-72.
12. Mohammadi A, Yousefi M, Taghipour A, Ebrahimipour H, Varmaghani M. Burden of disease caused by road traffic accidents in the city of Mashhad. health scope. 2020;9(4):e101657.
13. Askarishahi M, Rezazadeh Z, Vakili M. Trend in the deaths of road accidents in Iran in years 2006-2017. J Babol Univ Med Sci. 2020;22(1).
14. Seid M, Azazh A, Enquselassie F, Yisma E. Injury characteristics and outcome of road traffic accident among victims at adult emergency department of tikur anbessa specialized hospital, addis ababa, ethiopia: a prospective hospital based study. BMC Emerg Med. 2015;15:10.
15. Azarbakhsh H, Rezaei F, Dehghani SS, Hassanzadeh J, Dehghani SP, Mirahmadizadeh A. Mortality rate and years of life lost due to road traffic accidents in Fars province, 2004-2019. Iran J Public Health. 2023;52(9):1995-2003.

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