Burden of deaths from road traffic injuries in children aged 0–14 years in Turkey

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Abstract

Background: Childhood road traffic injuries (RTIs) are a major public health problem worldwide. Reliable and valid information on childhood RTIs is essential to reduce the number of deaths.

Aims: To determine the burden of deaths from RTIs in children aged 0–14 years from 2006 to 2019 in Turkey.

Methods: This descriptive study examined the change in road traffic fatalities in children according to age, gender, road user type, and place. The necessary data for this study were obtained from the Turkish Statistical Institute. We used Microsoft Excel to analyse data from 4614 children who died from RTIs in 2006–2019 in Turkey.

Results: The fatality rate from RTIs per 100 000 children aged 0–14 years increased from 1.41 in 2006 to 2.13 in 2019. The fatality rate for boys aged 0–9 and 10–14 years was higher than that for girls of the same age. The fatality rate for girls aged 0–9 years was higher than that for girls aged 10–14 years. The fatality rate for boys aged 10–14 years was higher than that for boys aged 0–9 years. Among the children who died from RTIs, 6.65% were drivers, 41.31% pedestrians and 52.04% passengers. Children lost their lives mostly as pedestrians on urban roads and as passengers on rural roads.

Conclusion: The death of children due to RTIs is a significant health burden in Turkey.

Keywords: children, road traffic injury, fatality, health burden, Turkey.

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Introduction

Approximately 1.35 million people worldwide die each year due to road traffic injuries (RTIs). In addition to deaths, between 20 and 50 million more people incur nonfatal injuries each year as a result of road traffic accidents (RTAs) (*1*). Moreover, RTAs cost 3.0% of gross domestic product in most countries (*2*).

Every year, around 950 000 children aged < 18 years die from injury and violence worldwide. Most of these deaths occur as a result of unintentional injuries, which account for almost 90.0% of injuries and they are among the top 3 causes of death among children aged 5–19 years (*3*).

Children have not developed a proper awareness of traffic risks, and often exhibit immature behaviour. When RTAs occur, the consequences are often severe because of the increased vulnerability of children (*4,5*). Every day, 3700 people die in RTAs worldwide, and at least 500 of them are children (*1, 4*). This means that nearly 182 500 children lose their lives every year due to RTIs. These deaths are a major public health issue, especially low- and middle-income countries.

Globally, RTIs are the fourth leading cause of death among children aged 5–9 years, third among children aged 10–14 years and, first among children aged 15–17 years (*6–8*). RTIs are the leading cause of death in children aged < 15 years in most Organisation for Economic Co-operation and Development countries, and an average of 3.5 children per 100 000 population die in RTAs (*9*). RTIs are also the leading cause of death in children in World Health Organization European Region (*10*). More than 30 children are seriously injured every day in the European Union (EU) and 2 are killed in RTAs (*4*).

In addition to young deaths, financial losses from RTAs are a huge burden for the victims, their families and their countries (*11*). The cost of deaths from RTIs is higher in children and adolescents than in adults. According to the London School of Economics and Political Science, the socioeconomic impact of life years lost from RTAs with child victims in France, Spain, Italy, Chile, Brazil, Argentina, Puerto Rico and India is $21.8 billion annually (*8*).

The majority of previous studies focused on health effects of child deaths from RTIs in Turkey (*12*). Limited hospital data were used in most of these studies. In this study, the burden of child deaths due to RTIs was examined according to age, gender, type of road user, and accident location, and which of these is most risky.

Methods

Data on RTAs are compiled from the administrative records of the General Directorate of Security and the General Command of Gendarmerie and published annually

by the Turkish Statistical Institute (TurkStat). The data for RTIs for children aged 0–14 years in 2006–2019 were obtained from TurkStat.

The following variables were used: age 0–9 and 10–14 years; gender; types of road users (driver, pedestrian and passenger); location of accident; and fatality rate per 100 000 child population by age and gender. Data on 4614 children who died from RTIs in 2006–2019 in Turkey were analysed in Microsoft Excel. Fatality rates were calculated using the cause-specific death rate formula (*13,14*) as follows:

$$\text{Cause-specific death rate} = \frac{\text{Number of deaths from RTIs in a calendar year}}{\text{Total population in that year}} \times 10^5$$

Findings from the study included a descriptive analysis of child deaths due to RTIs by age group, gender, and road user type and accident location. The study was an overview and helpful in understanding the situation of childhood RTIs for the purpose of developing strategic solutions in Turkey.

Results

Road traffic fatality rate

Children aged 0–14 years constitute 23.10% of the Turkish population, which was 83.2 million as of 2019. This includes 7.63% aged 0–4 years, 7.77% aged 5–9 years and 7.70% aged 10–14 years (*15*). In Turkey, 5473 people died from RTIs and 283 234 were injured in 2019. Children aged < 15 years constituted 7.49% of those who lost their lives and 13.12% of those injured. According to 2019 data, the share of deaths from RTAs among the total causes of death in children aged < 15 years was 2.59%. When deaths under the age of 1 year are not taken into account, this rate rises to 8.11%.

The high number of children who died from RTIs in 1995 and 2000 is noteworthy (Table 1). There was less motor vehicle traffic and mobility during these years in Turkey, and although the presence of children in traffic was more limited, the fatality rate was high. In 2006, the fatality rate of children aged < 15 years decreased significantly. The rate tended to decrease from 2006 to 2013; it started to increase in 2013 and reached another

Table 1 Road traffic fatality rates in Turkey

	Whole population		0–14 years		
	Deaths	Fatality rates	Deaths		Child fatality rates
1995	6004	9.38	784[a]		3.92
2000	5510	8.13	685[a]		3.39
2006	4633	6.64	267[a]		1.41
2007	5007	7.09	268[a]		1.44
2008	4236	5.92	231[a]		1.23
2009	4324	5.96	251[a]		1.33
2010	4045	5.49	208[a]		1.10
2011	3835	5.07	183[a]		0.97
2012	3750	5.02	179[a]		0.95
2013	3685	4.81	297		1.58
2014	3524	4.54	278		1.47
2015	7530[b]	9.56	573[b]		3.03
	At the accident 3831	30 d after 3699	At the accident 255	30 d after 318	
2016	7300[b]	9.15	498[b]		2.63
	At the accident 3493	30 d after 3807	At the accident 259	30 d after 239	
2017	7427[b]	9.19	506[b]		2.66
	At the accident 3534	30 d after 3893	At the accident 210	30 d after 296	
2018	6675[b]	8.14	465[b]		2.42
	At the accident 3368	30 d after 3307	At the accident 222	30 d after 243	
2019	5473[b]	6.58	410[b]		2.13
	At the accident 2524	30 d after 2949	At the accident 153	30 d after 257	

[a]*Until 2013, only includes deaths in traffic police responsibility area; however, since 2013, it also includes deaths in the gendarmerie responsibility area.*
[b]*Until 2015, only includes deaths at the accident scene; however, since 201,5 it also includes deaths within 30 days.*
Fatality rates are calculated according to 100 000 population of relevant age group.

peak in 2015, when there were significant increases. It should be stated that the addition of gendarmerie data to the number of deaths under age 15 years since 2013 and the implementation of the 30-day follow-up process since 2015 have been effective in these increases. In 2016, there was a significant decrease in the child fatality rate compared to 2015. Starting from 2018, the child fatality rate started to decrease again.

The age factor

Between 2006 and 2019, 66.06% of 4614 children who died from RTIs in Turkey were aged 0–9 years, and 33.94% were aged 10–14 years. In all years examined, the number of children aged 0–9 years who died from RTIs was higher than the number aged 10–14 years (Table 2). Data for 2006 for children aged 0–9 and 10–14 years could not be obtained from TurkStat and are not included in Table 2. Table 2 shows that the fatality rates due to RTIs in the 14 years were close to each other for both age groups. However, the number of deaths in children aged 0–9 years was almost twice that in children aged 10–14 years.

The gender factor

Boys constituted 51.32% of children aged 0–14 years in 2019 in Turkey, and girls 48.68%. Although the population of boys and girls was almost equal, the former were more likely to be involved in RTAs. Between 2006 and 2019, 63.0% of 4614 children who died from RTIs in Turkey were male and 37.0% were female. More boys than girls died from RTIs in all years studied (Table 3). Table 3 shows that boys aged 10–14 years had the highest risk in terms of RTAs. The fatality rate for boys aged 0–9 and 10–14 years was higher than that for girls of the same age. The fatality rate for girls aged 0–9 years was higher than that for girls aged 10–14 years. In contrast, the fatality rate for boys aged 10–14 years was higher than that for boys aged 0–9 years.

Types of road users

Between 2006 and 2019, 6.65% of 4614 children aged < 15 years who died from RTIs were drivers, 41.31% pedestrians and 52.04% passengers (Table 4). In all years studied, most children who died were passengers, followed by pedestrians. The highest number of children who died from RTIs between 2006 and 2019 were male pedestrians aged 0–9 years, followed by male passengers of the same age. This shows that male pedestrians aged 0–9 years were at higher risk of death in RTAs than other age groups and road user types. The highest number of girls who died from RTIs between 2006 and 2019 were passengers aged 0–9 years, followed by pedestrians of the same age. For both genders, more passengers and pedestrians aged 0–9 years died than those aged 10–14 years. There were fewer children who died as drivers than as passengers and pedestrians in both genders and both age groups. Boys who

Table 2 Road traffic deaths and fatality rates by age in Turkey

	No. of deaths				Fatality rates	
	Age 0–9 yr		Age 10–14 yr		Age 0–9 yr	Age 10–14 yr
2007	179		89		1.46	1.39
2008	151		80		1.23	1.24
2009	167		84		1.35	1.29
2010	131		77		1.06	1.17
2011	114		69		0.93	1.05
2012	120		59		0.97	0.91
2013	202		95		1.62	1.49
2014	181		97		1.44	1.55
2015	387		186		3.04	3.02
	At the accident 170	30 d after 217	At the accident 85	30 d after 101		
2016	339		159		2.65	2.59
	At the accident 172	30 d after 167	At the accident 87	30 d after 72		
2017	331		175		2.58	2.82
	At the accident 147	30 d after 184	At the accident 63	30 d after 112		
2018	309		156		2.41	2.46
	At the accident 142	30 d after 167	At the accident 80	30 d after 76		
2019	259		151		2.02	2.36
	At the accident 97	30 d after 162	At the accident 56	30 d after 95		

Until 2013, only includes deaths in traffic police responsibility area; however, since 2013, it also includes deaths in the gendarmerie responsibility area.
Fatality rates are calculated according to 100 000 population of relevant age group.

Table 3 Road traffic deaths and fatality rates by gender and age groups in Turkey

	Boys				Girls			
	Age 0–9 yr		10–14 yr		Age 0–9 yr		10–14 yr	
	No. of deaths	Fatality rates	No. of deaths	Fatality rates	No. of deaths	Fatality rates	No. of deaths	Fatality rates
2007	97	1.54	57	1.73	82	1.38	32	1.02
2008	84	1.33	58	1.75	67	1.12	22	0.70
2009	98	1.54	62	1.86	69	1.15	22	0.70
2010	75	1.19	46	1.36	56	0.94	31	0.97
2011	57	0.90	42	1.24	57	0.95	27	0.84
2012	72	1.13	40	1.20	48	0.80	19	0.60
2013	125	1.95	62	1.90	77	1.27	33	1.06
2014	113	1.75	73	2.27	68	1.11	24	0.79
2015	251	3.84	135	4.26	136	2.20	51	1.70
2016	215	3.27	113	3.59	124	1.99	46	1.54
2017	197	2.99	121	3.80	134	2.15	54	1.79
2018	180	2.73	108	3.32	129	2.06	48	1.56
2019	164	2.50	100	3.04	95	1.52	51	1.64

Until 2013, only includes deaths in traffic police responsibility area; however, since 2013, it also includes deaths in the gendarmerie responsibility area.
Until 2015, only includes deaths at the accident scene; however, since 2015, it also includes deaths within 30 days.
Fatality rates are calculated according to 100 000 population of relevant age group and gender.

died as drivers significantly outnumbered girls in both age groups.

Urban/rural roads

Between 2006 and 2019, 54.72% of 4614 children aged < 15 years died on urban roads and 45.28% on rural roads (Table 5). In some years, the number of children aged < 15 years who died on rural roads was higher, while in other years, more children died on urban roads. However, the number of children who died from RTIs on urban roads increased significantly from 2015 to 2017. Children aged < 15 years died mostly as pedestrians on urban roads but as passengers on rural roads. The number of children aged < 15 years who died as drivers on urban roads is striking.

Discussion

The current study clearly highlighted that children aged < 15 years who died from RTIs is a significant health burden for Turkey. In Turkey, as a result of the inclusion of gendarmerie data in the statistics since 2013 and 30-day follow-up process since 2015, there has been an increase in child deaths due to RTIs. However the number of deaths has tended to decrease compared with before 2000. Improvements in the road infrastructure, enforcement of penalties, traffic safety education targeting, social responsibility projects for traffic safety, development in vehicle technologies, and the widespread use of intelligent transport systems have had an impact on these decreases (*16*).

In Turkey, the fatality rate from RTIs in children aged 0–14 years was 1.41 in 2006 and rose to 2.13 in 2019. In comparison, for 2016, this rate was 0.82 for 27 EU countries (*17*), 2.04 for the United States of America (USA) and 0.52 for Japan (*18*). According to WHO, Africa has the highest rate of deaths in children aged < 18 years, with 15.6 fatalities per 100 000 population. This region is followed by the Eastern Mediterranean (11.2), Americas and South-East Asia (6.9), Western Pacific (5.7) and Europe (5.6) (*6*). According to Environmental Health Intelligence New Zealand, the fatality rate from RTIs in children aged 0–14 years decreased from 2.6 in 2006 to 1.4 in 2016 (*19*). According to the Australian Institute of Health and Welfare, in 2018 the fatality rate among children aged 0–14 years more than halved between 2009 and 2018 (1.7 to 0.7 per 100 000) (*20*).

In the current study, the number of children aged 0–9 years who died from RTIs was higher than the number aged 10–14 years, but the fatality rates per 100 000 were close to each other in the 2 age groups. This differs from the World Report on Child Injury Prevention Report 2008. This report found that the fatality rate per 100 000 due to RTIs for children aged 1–4 and 5–9 years was higher than in children aged 10–14 years in low- and middle-income countries, while it was lower than in children aged 10–14 years in high-income countries (*3*). Again, unlike our findings, in Australia, the fatality rate from RTIs in children aged 10–14 years was higher than in children aged 0–4 and 5–9 years (*20*). According to the Reducing Child Deaths on European Roads Report, 30.0% of deaths from RTIs in children aged < 18 years between 2014 and 2016 in 27 EU countries occurred in children aged 0–9 years, while 20.0% occurred in those aged 10–14 years. Children aged 10–13 years had a higher fatality rate than those aged 5–9 years, especially since they were more likely to have been unaccompanied on school trips (*17*).

In Turkey, it is more likely for boys to put themselves at risk than girls. Observational studies have reported that boys are more likely to run near traffic (*21*), to play

Table 4 Road traffic deaths by road user, by gender and age groups in Turkey

	No. of deaths											
	Age 0–9 yr driver		10–14 yr driver		0–9 yr passenger		10–14 yr passenger		0–9 yr pedestrian		10–14 yr pedestrian	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2006	7	2	13	0	43	49	33	20	49	28	17	6
2007	4	0	7	0	46	50	26	24	47	32	24	8
2008	6	1	10	0	40	44	28	14	38	22	20	8
2009	6	1	10	0	49	43	26	18	43	25	26	4
2010	6	1	12	0	39	42	25	22	30	13	9	9
2011	0	0	5	0	35	35	27	18	22	22	10	9
2012	2	1	9	1	34	24	25	12	36	23	6	6
2013	5	0	12	1	58	42	28	22	62	35	22	10
2014	5	0	14	0	51	38	39	20	57	30	20	4
2015	13	0	25	2	107	73	68	30	131	63	42	19
2016	11	3	27	3	93	63	50	24	111	58	36	19
2017	8	0	20	0	90	69	55	28	99	65	46	26
2019	6	0	20	1	89	77	55	31	85	52	33	16
2019	5	1	20	1	78	56	46	30	81	38	34	20
	84	10	204	9	852	705	531	313	891	506	345	164
Total	94		213		1557		844		1397		509	
	307 (6.65%)				2401 (52.04%)				1906 (41.31%)			

Until 2013, only includes deaths in traffic police responsibility area; however, since 2013, it also includes deaths in the gendarmerie responsibility area.
Until 2015, only includes deaths at the accident scene; however, since 2015, it also includes deaths within 30 days.

near traffic (*22*), and to choose riskier routes across intersections (*23*). Our finding that 63.0% of the 4614 children who died in RTAs between 2006 and 2019 were boys and only 37.0% were girls supports this situation. Boys had a higher fatality rate than girls in all the years studied (except for boys aged 0–9 years in 2011age). According to the World Report on Child Injury Prevention 2008, the fatality rate in children aged < 15 years was higher in boys than girls. The report states that boys were involved in traffic accidents almost twice as often as girls (*3,6*). Similarly, according to the European Report on Child Injury Prevention Report, the death rates of boys aged < 15 years due to RTIs was higher than for girls (*10*). Of the 630 children who died in 27 EU countries in 2016, 37.0% were girls and 63.0% were boys (*24*). In the USA between 1996 and 2006, 57.0% of deaths of children aged < 16 years due to RTIs were in boys and 43.0% in girls (*25*), while between 2010 and 2017, 56.0% of deaths of children aged < 15 years from RTIs were in boys and 44.0% in girls (*26*). In Lithuania, among children aged 0–14 years who died from RTIs during 1971–2010, boys died almost twice as often as girls (*27*). In Poland, during 2010–2014, boys died more often than girls (*28*). In China in 2014, boys had a higher risk of traffic accidents than girls had (*29*). In the current study, among children aged 0–14 years, boys were at higher risk of fatality from RTIs. Additionally, the fatality rate of girls aged 0–9 years was higher than in those aged 10–14 years, whereas the fatality rates of boys aged 10–14 years was higher than in those aged 0–9 years.

In the current study, 6.65% of children aged < 15 years who died from RTIs were drivers, 52.04% passengers and 41.31% pedestrians. In Turkey, 42.40% of drivers and 31.0% of front seat passengers wear seatbelts within cities but outside the city, these rates are 61.50% and 52.20%, respectively (*30*). Although the use of seatbelts by drivers and front seat passengers has increased over the years, seatbelt use by rear passengers is still too uncommon. Likewise, the rate of use of child seats is also low.

In all the years studied, we found that child passengers were the type of road users who lost their lives most often, followed by pedestrians. There is a similar situation in the 27 EU countries, where > 8000 children have died in RTAs in the last decade. Half of the 630 children who died in the EU in 2016 were passengers, one third pedestrians, and 13.0% cyclists (*4,17,31*). According to Ten Strategies for Keeping Children Safe on the Road Report, 38.0% of the children (aged < 19 years) who died in RTAs worldwide were pedestrians and 36.0% were passengers in 2010 (*6*). The remaining children who died on the roads each year were cyclists and motorcycle drivers (20.0%) who did not use helmets and children who drove vehicles (7.0%) (*6*). According to an assessment based on income, the proportion of children injured as pedestrians in high-income countries is 5.0–10.0%, while this increases to

Table 5 Road traffic deaths by accident location in Turkey

Age, year	No. of deaths																			
	Urban roads										Rural roads									
	Driver				Passenger				Pedestrian				Driver				Passenger			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
	0–9	10–14	0–9	10–14	0–9	10–14	0–9	10–14	0–9	10–14	0–9	10–14	0–9	10–14	0–9	10–14	0–9	10–14	0–9	10–14
2006	7	11	2	0	9	7	14	3	40	14	23	5	1	4	0	0	67	33	50	20
2007	4	6	0	0	11	5	13	4	45	18	29	7	1	8	0	1	74	50	55	19
2008	6	9	1	0	10	6	10	1	35	12	21	6	0	3	0	0	36	30	31	18
2009	6	8	1	0	13	4	8	1	39	19	23	3	1	3	0	0	46	18	30	18
2010	5	11	1	0	13	9	13	3	27	6	12	8	0	1	0	0	28	17	18	7
2011	0	5	0	0	10	8	4	4	17	9	21	5	0	0	0	0	25	19	31	14
2012	2	8	1	1	6	8	6	5	30	5	22	4	1	1	0	0	26	16	29	19
2013	4	9	0	1	12	10	12	4	55	13	29	8	0	2	0	0	36	22	35	17
2014	5	11	0	0	15	9	7	2	53	12	27	4	0	1	0	0	30	22	34	13
2015	12	17	0	1	33	18	18	11	117	30	59	13	0	1	0	0	35	21	37	20
2016	10	23	3	3	26	17	13	4	103	29	56	10	0	2	0	0	34	26	35	17
2017	7	13	0	0	34	24	22	8	91	39	61	21	1	7	0	0	56	31	47	20
2018	5	17	0	1	28	15	18	6	77	24	43	13	1	3	0	0	61	40	59	25
2019	5	15	1	0	21	17	13	4	72	23	36	15	0	5	0	1	57	29	43	26
Total	**258**				**629**				**1638**				**49**				**1772**			
	2525 (54.72%)																2089 (45.28%)			
	268																			

Until 2013, only includes deaths in traffic police responsibility area; however, since 2013, it also includes deaths in the gendarmerie responsibility area.
Until 2015, only includes deaths at the accident scene; however, since 2015, it also includes deaths within 30 days.

30.0–40.0% in low- and middle-income countries (*3*). In the current study, deaths from RTIs mostly affected pedestrians in the 0–9 years' age group for boys and passengers for girls of the same age. In Cape Town, South Africa, the burden of RTAs primarily affected male pedestrians aged 5–9 years in 2014 (*32*). In Lithuania, among children aged 0–19, about half of deaths due to RTIs from 1998 to 2012 were car occupants, and about a quarter were pedestrians (*33*). In Victoria, Australia, the most vulnerable age group for passengers and pedestrians was 0–4 years (*34*).

In Turkey, 6.65% of children aged < 15 years who died from RTIs were drivers in 2019. According to the IHME data, this rate is 7.0% for children aged < 19 years worldwide. In some countries, children aged < 18 years are allowed to drive under certain conditions. However, young and novice drivers are also responsible for many RTAs globally (*6*). In the current study, a significant number of boys aged < 15 years died as drivers. Yavuz and Hamzaoğlu investigated deaths from RTIs in children aged 0–17 years between 2003 and 2007 in Turkey, and found that a worrying number died as drivers (*35*). This shows that boys aged 10–14 years and their families are not sufficiently aware of the dangers of driving without a license and cannot develop awareness.

Between 2006 and 2019, 54.72% of 4614 children aged < 15 years died on urban roads and 45.28% on rural roads in Turkey. When deaths under the age of 15 years were analysed by area, children lost their lives mostly as pedestrians on urban roads and as passengers on rural roads. According to the 2014–2016 data from the 27 EU countries, 46.0% of children aged < 15 years who died from RTIs were on rural roads, 46.0% on urban roads, and 7.0% on highways (*17,31*).

The limitations of the current study were as follows. While data on deaths from RTIs included only police data before 2013, gendarmerie data were added after 2013. As of 2015, those who died within 30 days

of the accident were included in the data. These changes in data collection method complicate the analysis. In international statistics, age for deaths caused by RTIs are grouped as < 1, 1–4, 5–9 and 10–14 years. However, in Turkey, age groups were 0–9 and 10–14 years. This prevented the detailed examination of deaths from RTIs under the age of 9 years. In order to reduce the deaths from RTIs in children aged < 9 years, and to take the necessary precautions, it would be beneficial to divide this age group as < 1, 1–4 and 5–9 years. There are no published data of accident locations such as pedestrian crossings, school crossings and intersections, and passenger deaths in cars, buses or trucks in TurkStat. This makes it difficult to take effective measures to prevent child deaths caused by RTIs.

Conclusion

RTIs constitute a major public health issue in Turkey. Children aged 0–9 years were almost twice as likely as those aged 10–14 years to be involved in RTAs. Almost two thirds of victims of RTIs were boys. More than 50.0% of child road fatalities were car occupants and 40.0% pedestrians. Children on rural roads were at greater risk than those on urban roads. In 2019, RTIs were the second leading cause of death for boys aged 5–14 years but the third leading cause of death for girls. Although children have physical and cognitive limitations that make them more vulnerable than adults in road traffic, children's injuries can be prevented. The road safety of children should be a high priority for families, other road users, government and municipalities. Research on childhood road injuries is too limited in Turkey. The current study was conducted at national level and similar studies are recommended at the provincial level.

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Charge de mortalité liée aux traumatismes dus aux accidents de la circulation chez les enfants âgés de 0 à 14 ans en Turquie

Résumé

Contexte : Les traumatismes dus aux accidents de la circulation chez les enfants constituent un problème de santé publique majeur dans le monde entier. Il est essentiel de disposer d'informations fiables et valides sur ces accidents pour réduire le nombre de décès.

Objectifs : Déterminer la charge de mortalité liée aux traumatismes dus aux accidents de la circulation chez les enfants âgés de 0 à 14 ans entre 2006 et 2019 en Turquie.

Méthodes : La présente étude descriptive a examiné l'évolution du nombre de décès dus à des accidents de la circulation chez les enfants selon l'âge, le genre, le type d'usager de la route et le lieu. Les données nécessaires à cette étude ont été obtenues auprès de l'Institut statistique de Turquie. Nous avons utilisé Microsoft Excel pour analyser les données de 4614 enfants décédés suite à des traumatismes dus à des accidents de la circulation entre 2006 et 2019 en Turquie.

Résultats : Le taux de létalité des accidents de la circulation pour 100 000 enfants âgés de 0 à 14 ans est passé de 1,41 en 2006 à 2,13 en 2019. Ce taux chez les garçons âgés de 0 à 9 ans et de 10 à 14 ans était supérieur à celui observé chez les filles du même âge. Chez les filles âgées de 0 à 9 ans, ce taux était plus élevé que chez les filles de 10 à 14 ans. Le taux de létalité des garçons âgés de 10 à 14 ans était plus important que celui des garçons âgés de 0 à 9 ans. Parmi les enfants décédés suite à des traumatismes dus à des accidents de la circulation, 6,65 % étaient des conducteurs, 41,31 % des piétons et 52,04 % des passagers. Les enfants ont perdu la vie principalement en tant que piétons sur les routes urbaines et en tant que passagers sur les routes rurales.

Conclusion : Les décès d'enfants causés par des traumatismes dus à des accidents de la circulation constituent une charge sanitaire importante en Turquie.

عبء الوفيات المترتبة على الإصابات الناجمة عن حوادث الطرق في صفوف الأطفال الذين تتراوح أعمارهم بين 0 و14 سنة في تركيا

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الخلاصة

الخلفية: تعتبر الإصابات الناجمة عن حوادث الطرق في مرحلة الطفولة مشكلة صحية عامة كبرى تنتشر في جميع أنحاء العالم. ومن الضروري توفير معلومات موثوق بها وصحيحة عن الإصابات الناجمة عن حوادث الطرق في سن الطفولة، للحد من عدد الوفيات.

الأهداف: هدفت هذه الدراسة الى تحديد عبء الوفيات المترتبة على الإصابات الناجمة عن حوادث الطرق في صفوف الأطفال الذين تتراوح أعمارهم بين 0 و14 سنة في الفترة من 2006 وحتى 2019 في تركيا.

طرق البحث: تناولت هذه الدراسة الوصفية التغير الطارئ على معدلات الإماتة المترتبة على الوفيات الناجمة عن حوادث الطرق في صفوف الأطفال وفقا للعمر، ونوع الجنس، ونوع مستخدمي الطرق، والمكان. وأخذت البيانات اللازمة لهذه الدراسة من معهد الإحصاء التركي. واستخدمنا برنامج ميكروسوفت إكسل لتحليل بيانات 4614 طفلاً تُوفوا بسبب الإصابات الناجمة عن حوادث الطرق فيما بين عامَيْ 2006 و2019 في تركيا.

النتائج: ارتفع معدل الإماتة المترتب على الإصابات الناجمة عن حوادث الطرق لكل 100000 طفل تتراوح أعمارهم بين 0 و14 سنة من 1.41 في عام 2006 إلى 2.13 في عام 2019. وكان معدل إماتة الفتيان الذين تتراوح أعمارهم بين 0 و9 سنوات و10–14 سنة أعلى من معدل إماتة الفتيات في العمر نفسه. وكان معدل إماتة الفتيات اللواتي تتراوح أعمارهن بين 0 و9 سنوات أعلى من معدل إماتة الفتيات اللواتي تتراوح أعمارهن بين 10 و14 سنة. وكان معدل إماتة الفتيان الذين تتراوح أعمارهم بين 10 و14 سنة أعلى من معدل إماتة الفتيان الذين تتراوح أعمارهم بين 0 و9 سنوات. ومن بين الأطفال الذين توفوا بسبب الإصابات الناجمة عن حوادث الطرق، كان 6.65٪ من السائقين، و41.31٪ من المشاة، و52.04٪ من الركاب. وفقد الأطفال حياتهم في الغالب في حال كانوا مشاةً على الطرق الحضرية، ورُكابًا على الطرق الريفية.

الاستنتاجات: تُعَدُّ وفاة الأطفال بسبب الإصابات الناجمة عن حوادث الطرق عبئًا صحيًّا كبيرًا في تركيا.

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