

Accidental injuries

Introduction

Accidental injuries represent a major health risk for children and adolescents. According to estimates of the World Health Organization, approximately 830,000 under 18 year olds throughout the world die in accidents every year (WHO 2008). Traffic accidents are the most common cause of death in young people between 10 and 19 (WHO 2014). In Germany, accidents are also still the most common cause of death for children over one year of age (Ellsäßer 2014), despite decreasing mortality rates. Injuries, which are primarily the result of accidents, are one of the most frequent reasons for medical treatment in hospitals during childhood and adolescence. In 2012, more than 280,000 children and young people under the age of 20 received hospital care due to an injury. This corresponds to 16.1% of all hospital treatments in this age group (Statistisches Bundesamt 2013; Saß et al. 2014). Due to high treatment costs as well as temporary or permanent limited functioning, pain and reduced quality of life, accident prevention is very important from a public health perspective – particularly in view of the potentially preventable nature of many accidents (Kahl et al. 2007; Saß et al. 2014).

Indicator

On the topic of injuries as a result of accidents, the parents participating in KiGGS Wave 1 were asked about non-fatal, accidental injuries and poisoning in their children within the past 12 months (Saß et al. 2014). Information on intentional injuries through violence or self-harm was explicitly not requested. Minor injuries were excluded by asking about “accidents and poisoning requiring medical treatment”. After the opening question: “In the last 12 months, did your child suffer an injury due to an accident or poisoning which required medical treatment?”, the parents who answered “Yes” were asked up to twelve additional questions on the accident. These related, for instance, to the number of accidents and the location of the accident, the circumstances of the accident and the duration of any inpatient treatment (for the child’s most recent accident).

The tables show the proportion of children and adolescents that required medical treatment due to an accident-related injury in the last 12 months, differentiated

according to sex, age and social status. The figure shows which accident locations define the circumstances of the accident in the different age groups.

Key results

- ▶ 15.5% of children and adolescents aged between 1 and 17 received medical treatment due to an accident in the last 12 months.
- ▶ Boys are affected by accidental injuries significantly more often than girls (17.0% vs. 14.0%). There is hardly any difference between the age groups with respect to the frequency of accidents.
- ▶ While the majority of accidents involving very young and pre-school age children happen at home or in private settings, the proportion of accidents in playgrounds and sports facilities or childcare and educational institutions increases in the older age groups.
- ▶ Every eighth child involved in an accident spent at least one night in hospital (12.3%).
- ▶ The proportion of children and adolescents who received medical treatment due to an accident-related injury in the last 12 months does not differ according to the social status of the family.

Conclusion

For the prevention of accidental injuries, detailed information on the circumstances and determinants of the accident is required (Varnaccia et al. 2014). In Germany, the available data on accidental injuries is heterogeneous. Specific data collections are only in place for certain locations of non-fatal accidents (school, traffic), but not for others (at home, during leisure time). In addition to official statistics and routine data of social insurance providers, population-related studies contribute to the description and analysis of the circumstances of accidents (RKI 2013). For children and adolescents, the KiGGS study supplies important information in this area. A comparison with the data of the KiGGS

baseline study collected from 2003 to 2006 shows that the prevalence of accidents, accident locations, and age/sex distribution frequencies have remained largely unchanged in the last number of years (Saß et al. 2014). The finding that boys are affected by accidental injuries more often than girls is also reflected in the hospital diagnosis, road traffic accident and in the cause of death statistics (Ellsäßer 2014; Varnaccia et al. 2014). The results from KiGGS Wave 1 demonstrate that, although the overall frequency of accidents does not vary according to age, the accident locations and accident types do vary according to the age of children and adolescents. For prevention measures to be effective, they need to take these differences into account and be specific to the particular setting. With respect to social differences, it is evident that the indicator presented here – the prevalence of accidents requiring medical treatment over a 12-month period – does not vary with the social status of the family. However, children and adolescents with low and middle social status receive inpatient treatment more often and for a longer period after an accident (Saß et al. 2014). This is consistent with findings in other studies that children from families with a low level of education and low income are at a higher risk of being involved in traffic accidents and thermal injuries (Kahl et al. 2007; Ellsäßer, Böhmman 2004).

Note: A detailed description of the study as well as explanations on the method are available on the KiGGS study website, www.kiggs-studie.de, and in Lange et al. (2014). Further results regarding accidental injuries can be found in Saß et al. (2014).

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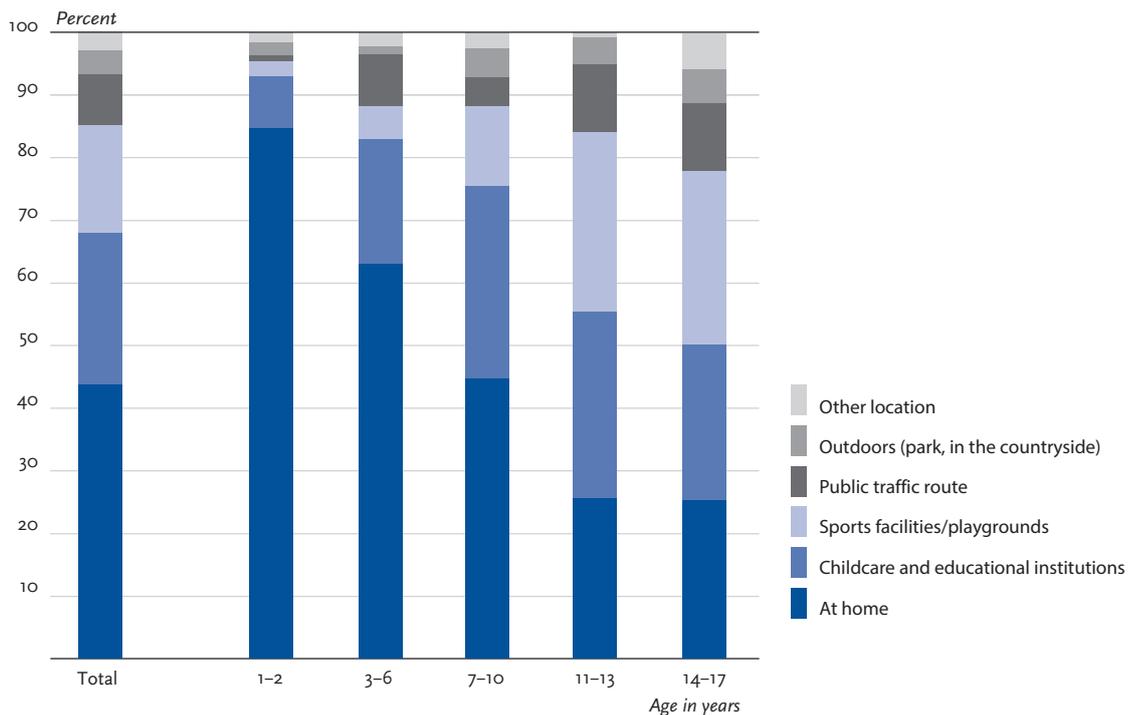
Table 1
Proportion of 1 to 17-year-old girls with at least one accidental injury accident-related injury requiring medical treatment in the last 12 months according to age and social status

	accidental injury: yes	
	%	(95% CI)
Girls	14.0	(12.7–15.4)
Age		
1 to 2 years	12.7	(9.6–16.8)
3 to 6 years	14.4	(11.7–17.7)
7 to 10 years	12.1	(9.9–14.8)
11 to 13 years	15.1	(12.1–18.8)
14 to 17 years	14.9	(12.5–17.7)
Social status		
low	15.1	(11.4–19.9)
medium	13.6	(12.1–15.2)
high	14.1	(12.3–16.0)
Total (girls and boys)	15.5	(14.5–16.6)

Table 2
Proportion of 1 to 17-year-old boys with at least one accidental injury accident-related injury requiring medical treatment in the last 12 months according to age and social status

	accidental injury: yes	
	%	(95% CI)
Boys	17.0	(15.7–18.5)
Age		
1 to 2 years	16.7	(13.1–21.0)
3 to 6 years	17.4	(15.0–20.1)
7 to 10 years	13.4	(11.0–16.3)
11 to 13 years	19.9	(16.8–23.3)
14 to 17 years	18.1	(15.5–21.0)
Social status		
low	15.6	(11.9–20.3)
medium	17.7	(16.0–19.6)
high	16.4	(14.4–18.6)
Total (girls and boys)	15.5	(14.5–16.6)

Figure 1
Accident locations according to the most recent accident among children and adolescents in different age groups



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