



## HBSC Briefing Paper 19

# Adolescent Injuries

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Injury is the leading cause of death among adolescents aged 10-19 years and many more children and adolescents suffer injuries which require medical attention and may result in disability<sup>1</sup>. It is important to understand the risk factors for adolescent injury to inform the development of appropriate policies and programmes. This briefing paper presents findings from the 2010 Health Behaviour in School-aged Children survey in Scotland on injury prevalence and its association with risk behaviours.

## Key findings

- 47% of adolescents reported at least one medically treated injury in the past 12 months.
- Injuries were more common among boys than girls (52.9% and 42.0%, respectively).
- There is little variation in reported injuries between the ages of 11 and 15.
- Adolescents from higher-affluence families were more likely to report a medically attended injury.
- Prevalence of medically attended injury among adolescents remained the same between 2002 and 2010.
- Alcohol consumption, cannabis use, physical fighting and being bullied are associated with increased prevalence of injury.

## The Scottish Context

In Scotland, accidents among children aged  $\leq 15$  years cost the NHS £40 million every year<sup>2</sup>. Unintentional injuries accounted for approximately 1 in 8 emergency hospital admissions for children in 2012/13. Children living in the most deprived areas are more likely to have an emergency admission to hospital for unintentional injury than those living in the least deprived areas. While the number of deaths due to injury in Scotland has fallen in recent years, they are still the most frequent cause of death among the adolescent age group<sup>3</sup>.

## Prevalence of medically attended injury\* in last 12 months

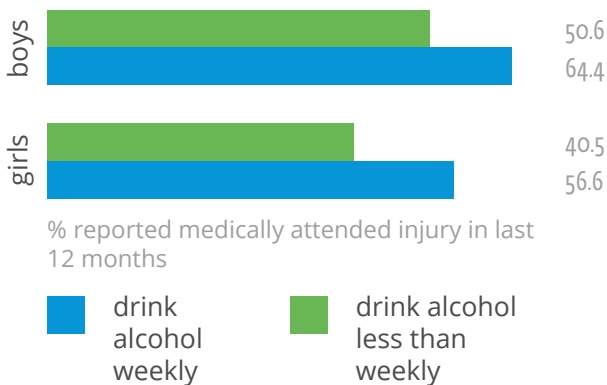
|                        | n    | %    |
|------------------------|------|------|
| All                    | 3062 | 47.3 |
| Gender                 |      |      |
| Boys                   | 1675 | 52.9 |
| Girls                  | 1387 | 42.0 |
| Grade                  |      |      |
| P7                     | 936  | 45.8 |
| S2                     | 972  | 49.0 |
| S4                     | 1154 | 47.3 |
| Family Affluence Scale |      |      |
| High                   | 1095 | 49.1 |
| Medium                 | 967  | 48.1 |
| Low                    | 1000 | 44.8 |



More boys than girls reported having had an injury requiring medical attention in the last 12 months. Prevalence did not vary significantly by age, but was higher among those from more affluent families.

\*medically attended injury was defined as those requiring treatment by a doctor or nurse.

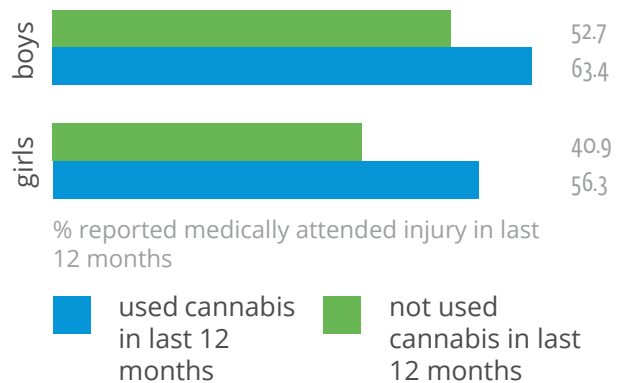
### Injury & alcohol use



- Drinking alcohol weekly was associated with higher prevalence of injury.
- This association was observed in both boys and girls and all age and family affluence groups.

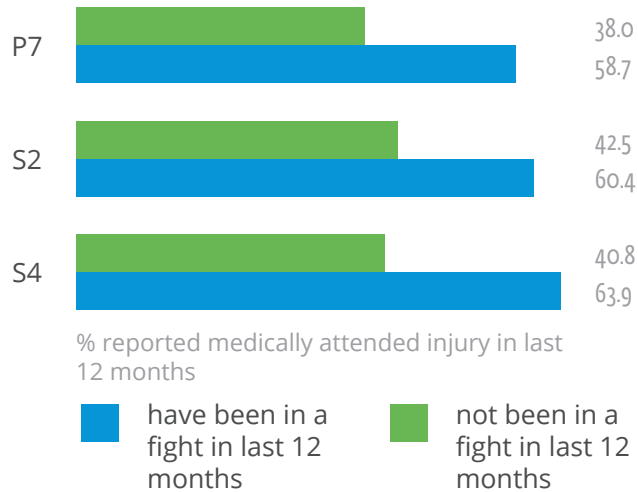
### Injury & cannabis use\*

\*S4 pupils only



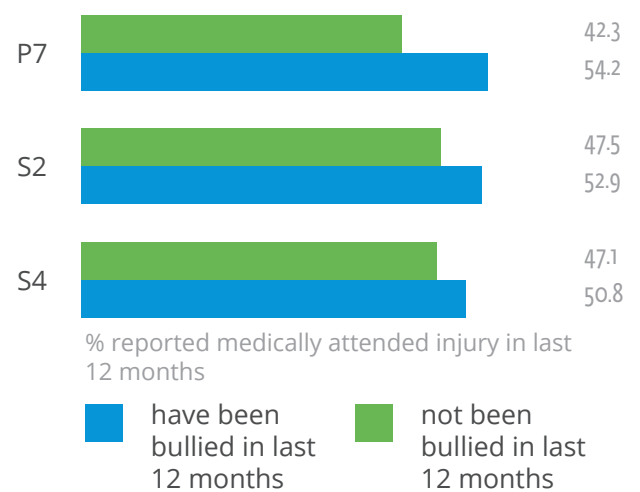
- Among S4 pupils, prevalence of injury was higher in those who had used cannabis within the last 12 months compared with those who had not.
- This was the case for both boys and girls and across all affluence groups.

## Injury & fighting



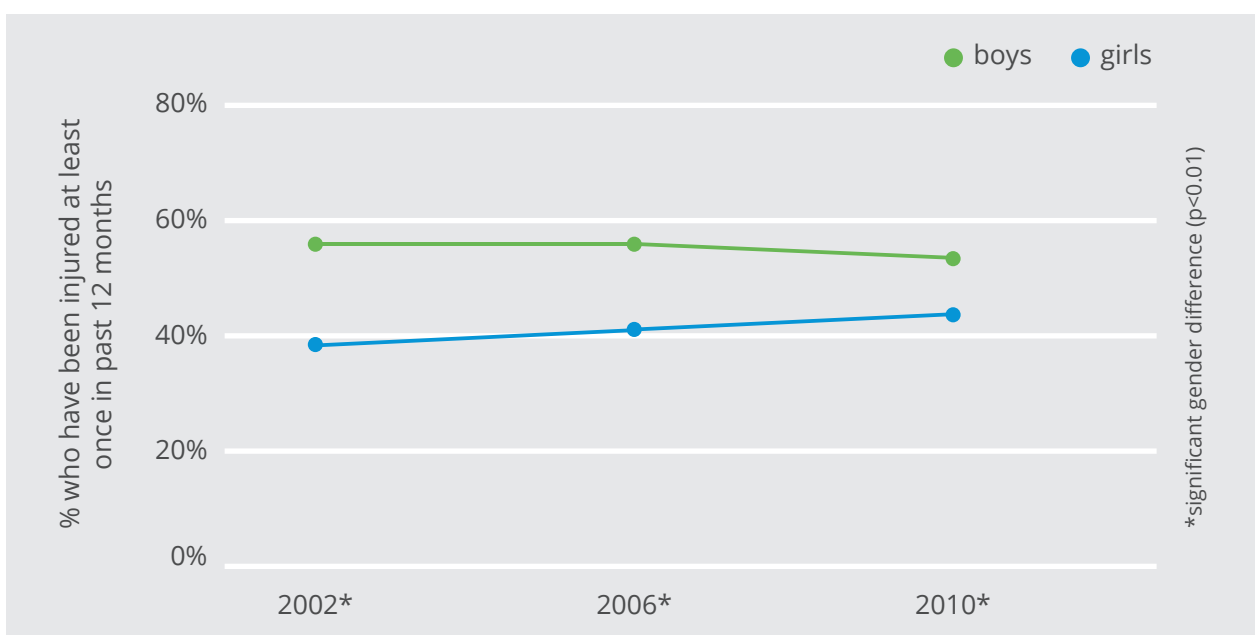
- For all year groups, injury prevalence was higher among those who had been involved in a physical fight during the last 12 months.
- Among those involved in a physical fight, risk of injury increased with age.
- The association between fighting and injury was consistent for boys and girls and all family affluence groups.

## Injury & bullying



- For all year groups, injury prevalence was higher among those who had been bullied in the last 12 months.
- Among those who had been bullied in the last 12 months, the risk of injury decreased with age.
- The association between being bullied and injury was observed among boys and girls and all family affluence groups.

## Trends in adolescent injury



Prevalence of medically attended injury among adolescents in Scotland has remained stable since 2002.

## Background

Worldwide, approximately 950,000 children under the age of 18 die each year as a result of unintentional injury. Although the majority of these are in low or middle income countries, 40% of child and adolescent deaths in developed countries are due to injury.<sup>1</sup> An additional 10 to 30 million children and adolescents are affected by non-fatal injury every year.<sup>4</sup> The five leading causes of childhood injury are road traffic accidents, drowning, poisoning, burns and falls.<sup>5</sup> There is also evidence that prevalence of intentional injury (for example, self-harm and suicide) may be increasing. Injury is therefore a major public health problem and the global burden of disease related to injury is expected to rise dramatically by 2020.<sup>5</sup> As a result, there have been calls for urgent action to address the problem of child and adolescent injury.<sup>1</sup>

## Methods

This briefing paper presents data from the 2010 Health Behaviour in School-Aged Children (HBSC): WHO Collaborative Cross-National Survey in Scotland. HBSC is a unique cross-national research study of the health and health behaviours of adolescents across Europe and North America. The 2010 Scottish HBSC survey was carried out in 273 schools across Scotland. A nationally representative sample of 6,771 pupils from P7, S2 and S4 took part in the survey. Medically attended injury was assessed using the following item:

During the past 12 months, how many times were you injured and had to be treated by a doctor or nurse? (I was not injured in the past 12 months/1 time/2 times/3 times/4 times or more).

Further details of the HBSC variables included in this briefing paper are available at [www.hbsc.org](http://www.hbsc.org).

## Discussion of key findings

The findings presented here show that injury is highly prevalent among the Scottish adolescent population. Almost half of adolescents reported a medically attended injury within the last 12 months and this was more common among boys than girls. We found injuries requiring medical attention to be higher among more affluent groups. This may reflect a higher prevalence of sports-related injuries or greater likelihood of seeking medical assistance; these are areas which need to be explored further. In line with previous research, risk

behaviour was found to be significantly associated medically attended injury among adolescents and this relationship was consistent among age, gender and socio-economic groups. This is important because Scottish adolescents have relatively high rates of alcohol use and cannabis use compared to young people in many other European countries.<sup>7</sup> Social assets such as a supportive home or school environment are associated both with reduced risk of injury and with lower prevalence of risk behaviours.<sup>6</sup> However, among young people involved in multiple risk behaviours, having a supportive family or school does not mitigate risk of injury.<sup>6</sup> This suggests that there is a need to target injury prevention programmes at those engaged in risk taking behaviours. Further research is required to investigate the types, severity, causes and consequences of injury in order that appropriate preventive measures can be put in place.

## References

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Further information on the HBSC International study can be found at [www.hbsc.org](http://www.hbsc.org).

Further information on the HBSC Scotland survey can be found at [www.cahru.org](http://www.cahru.org).

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