

KiGGS – The German Health Interview and Examination Survey for Children and Adolescents

Abstract Principal Publication

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Injuries among children and adolescents (1–17 years) and implementation of safety measures. Results of the nationwide German Health Interview and Examination Survey for Children and Adolescents (KiGGS)

Abstract Parent interviews with regard to their children's accidents and to accident protective measures in the Health Interview and Examination Survey for Children and Adolescents (KiGGS) aimed at extending our knowledge of age- and gender-specific injuries and to identify risk groups and risk factors for injury prevention. The parents of 16,706 children (aged 1–17 years) were asked about their children's injuries within the last 12 months which were medically treated, and about accident mechanisms, consequences of injuries, and ambulatory and hospital treatment. In addition, parents and children aged 11 to 17 years ($n = 6813$) were asked to give information on protective measures. According to the parents 15.9 % of the children had at least one injury within the last 12 months, 15.2 % because of an accident and 0.8 % because of assault. In the age group 1–17 boys have been injured significantly more often than girls (17.9 % vs. 14.0 %). Overall, 13.3 % of 2,410 injured children and adolescents were hospitalized. Two thirds of the accidents among toddlers were domestic accidents (60 %) whereas leisure and sport accidents were most prevalent in children and adolescents aged 5–14 years and 15–17 years (32.1 % and 38.9 %). The proportion of accidents in child care facilities and educational institutions tripled from infancy to school age (age 5–14 years) (10.9–28.7 %), as did traffic accidents (5.6–16.7 %). The three most frequent injury mechanisms in the age range 1–17 years were falls on level ground (35.2 %), falls from heights (25.2 %) and collisions with objects or persons (20.6 %). Falls from heights showed the highest risk in toddlers (35.8 %). Contusions, sprains and strains increased to a highest level of 50.9 % in adolescents; likewise, bone fractures increased from 10.7 % in toddlers to 21.8 % in adolescents aged 15–17 years. An influence of socioeconomic status on injuries overall and on consequences of injuries was not seen. For traffic accidents in children aged 1–17 years boys ($p = 0.019$) and girls ($p = 0.047$) from families with lower socioeconomic status showed higher rates of accidents than children from families with higher socioeconomic status. The application of protective measures was lowest in the age group 14–17 years. While according to the parents about 90 % of children aged 3–4 years wear a helmet when riding a bicycle or when skating, this quote was lower in the age group 5–14 (60 %) and dropped to about 15 % in the age group 14–17 (about 15 %). Also the rate for using protective clothes was lowest in age group 14–17 (boys 41.8 %; girls 52.2 %). In children and adolescents the rate of self-reported helmet use is lower than estimated by their parents. In all age groups migration background and low socioeconomic status were associated with lower use of protective measures (helmets and protective clothes). The age related data analysis should be the starting point in prevention measures for specific risk groups considering migration and socioeconomic status. Prevention activities in traffic should focus on families with low social status. Adolescents should be specifically and adequately addressed regarding the benefits of certain safety measures when riding a bicycle and when skating.

Keywords Health Survey - Children - Adolescents - Injuries - Falls - Socioeconomic status - Migration status - Helmet rates - Protective measures
