

Protective gear in snow sport: wearer behaviour and reasons for wearing

Wearing a helmet for snow sport and also wrist protection while snowboarding can prevent the majority of head and wrist injuries. A study determined the reasons for the wearing or not wearing of protective gear and the wearer percentage of various protective articles.



Problem and Objective

Every year, 290 000 people living in Switzerland injure themselves while practising sport, of these 42 000 accidents occur while skiing and 25 000 while snowboarding. Over 10 % of skiing and snowboarding casualties suffer head or neck injuries. Injuries to the wrist while snowboarding amount to at least 20 %. As well as the helmet, there are protective articles for various other parts of the body on the market for snowboarders and skiers. Wrist, elbow, knee and hip protection primarily pad the major joints but suitable protective articles also exist for the back and coccyx. The bfu Report 54 «Helmet and wrist protection in snow sport: effect and specifications» (Brügger, 2004) goes into detail on the construction aspects of these protective articles and also documents their great protective effect.

This study was carried out with the objective of determining, for the first time in Switzerland, the frequency as well as the reasons and predictors for wearing or not wearing personal protective gear.

Procedure

Almost 3500 skiers and snowboarders were observed in 20 winter sports resorts to determine the percentage of helmet wearers. In a further short survey, almost 1600

snow-sportsmen and women were questioned on the use of protective gear and a further 1600 questioned on their reasons for wearing or not wearing protective gear.

R E S E A R C H

Results

From the figures observed, it has been calculated that 14.5 % of all snow-sportsmen and women wear a helmet. For skiers the figure is 13.0 %, for snowboarders 19.8 %. The percentage of snow-sportsmen and women wearing wrist protection is 36.9 %. The percentages for wearing other forms of protective gear are considerably lower. Most frequently worn are back protection with 4.8 %, and knee protection with 4.1 %.

A multiple logistical regression analysis identified the following variables as significant or insignificant for the probability of helmet wearing. In the following table, the upper part lists the most important factors influencing wearer behaviour, while the lower part lists those factors which have no effect.

Helmet
Significant variables for wearing <ul style="list-style-type: none"> • Age: under 17-year olds wear a helmet more often • Sex: men • Skill level: expert • Completed snow-sport training • Improvement as motive • Experience of snow-sport injury • Fear of injury • No criticism of wearer comfort • Acceptance of advisability • No feeling of limitation of freedom
Insignificant variables for wearing <ul style="list-style-type: none"> • Type of sport • Language region • Experience in the sport • Motives such as recreation, social contact, rivalry, desire to experience limits • Rating of protective effect • Accident experience outside snow sport • Rating of aesthetics and cost

Wrist protection
Significant variables for wearing <ul style="list-style-type: none"> • Age: under 17 and over 46-year olds wear wrist protection more often • Skill level: advanced but not expert • Recreation as motive • Experience of snow-sport injury • No criticism of wearer comfort • Acceptance of advisability
Insignificant variables for wearing <ul style="list-style-type: none"> • Sex • Language region • Experience in the sport • Motives such as social contact, learning, rivalry, desire to experience limits, fun • Rating of protective effect • Accident experience outside snow sport • Rating of costs • Experience of snow-sport instruction • Rating of possible detraction from feeling of freedom

Conclusions

As yet comparatively little attention is paid to wearing a helmet. One of the main reasons for not wearing one is given as «not having considered it», another, the fear that the helmet will be uncomfortable. As yet the percentage of snowboarders wearing wrist protection is also very low, in particular amongst beginners where it would be of most benefit. As with helmet wearing, reasons bearing weight here are an ignorance of the protective effect and a misconception of the features of the respective protective article. It is therefore of major importance to make snow-sportsmen and women aware of the need for protection and the protective options. Snow-sportsmen and women must be convinced that a properly fitted protective article is comfortable. One logical measure would be to allow helmets to be tested directly on-piste. On the basis of these findings, the elements of the bfu «Enjoy sport – protect yourself» prevention campaign were planned to encourage snow-sportsmen and women to wear a helmet and snowboarders to also wear wrist protection.

Source

Fuchs, B., Gmünder, C., Brügger, O., Cavegn, M. & Walter, M. (2005). *Personal protective gear in snow sport: wearer behaviour and reasons for wearing* (bfu-report no. 55, with summary in English). Bern: Swiss Council for Accident Prevention bfu.

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