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Is awareness of preventive training associated with decreased risk of injury?

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Background

Little is known about the prevalence proportion of sports injuries in Denmark. In addition, the beliefs amongst athletes regarding injury-preventive training regimes and the association with injury risk are lacking.

Objective

To examine the prevalence proportion of injured athletes in a population-based sample and to describe beliefs regarding their ability to prevent injuries through proper training.

Design

Population-based cross-sectional study based on interviews. Conducted by Gallup for the Danish insurance company "Gjensidige Forsikring".

Setting

Denmark, March 2016.

Participants

A random sample of 1,059 persons from the Danish population above 18 years (Table 1).
Assessment of risk factors: During the interview, the following questions were asked: Are you sports active? Have you sustained any sports-related injury within the past 3 years that prevented sports activity for a shorter or longer period? Do you know how to train properly to prevent injury? In addition, assessment of demographics included age, sex, social class, income, education, number of children, county, union member and unemployment fund.
Main outcome measurements: Sports active, injury within 3 years and prevention knowledge.

Results

The prevalence proportion of sports active was 60.9% [95%CI: 57.9-63.9]. A majority (61.8% [95%CI: 58.3–65.2]) reported to be aware of proper injury-preventive training, whereas 25.4% [95%CI: 22.0–28.9] sustained an injury within 3 years. Sports activity increased with education (OR=1.17 [95%CI: 1.1–1.23], P=0.0001). Risk of injury decreased with increasing age (OR=0.64 [95%CI: 0.54–0.74], P<0.0001) and female sex (OR=1.61 [95%CI: 1.11–2.35], P=0.013). Knowledge of injury prevention increased with age (OR=1.15 [95%CI: 1.02–1.3], P=0.022) and female sex (OR=1.35 [95%CI: 1.13–1.51], P=0.004). Knowledge of injury prevention did influence injury and there was no association of preventive training on injury (OR=1.07 [95%CI: 0.71-1.67]). Controlling for age, sex, education and social class or interactions did not influence the OR.

Discussion

The prevalence proportion of sports active individuals was similar to other population-based studies amongst adult persons in Denmark (1). Interestingly, self-reported awareness of injury prevention strategies was not associated with a decreased proportion of self-reported injuries compared with those reporting to have no awareness about injury prevention. Owing the cross-sectional design, we are unable to evaluate if the awareness was increased as a consequence of injury or respondents had increased awareness prior to sustaining a sports-related injury. In the latter case, athletes may be recommended to participate in injury prevention programmes even though they claim being able to manage it themselves.

Conclusions

The prevalence proportion of injuries seems to be a public-health issue. A majority believe they know how to train properly to prevent injuries. However, awareness of preventive training was not associated with decreased injury risk. There is a need, as in other studies (2-4), to change and improve attitude and knowledge of injury prevention, and to understand the relationship between compliance to injury prevention programmes and reduced injury risk.

Table 1

Case Processing Summary – Sports active

		N	Prevalence proportion
Have you within the last 3 year sustained an injury in training inhibiting to train for a long or shorter period?	Yes	179	28,7%
	No	437	69,9%
	N/A	9	1,4%
Are you aware of proper injury-preventive training?	Yes	407	65,1%
	No	154	24,7%
	Do not know	64	10,2%
Sex	Male	300	48,0%
	Female	325	52,0%
Age	18-39 y	220	35,2%
	40-49 y	107	17,1%
	50-59 y	97	15,5%
	60 + y	201	32,2%
Social class	High	172	27,5%
	Middle	238	38,0%
	Low	135	21,6%
	Not defined	80	12,8%
Education	Primary school	152	24,4%
	General secondary	38	6,0%
	Commercial secondary	13	2,1%
	Enterprise training	226	36,1%
	Short high education	33	5,4%
	Medium high education	101	16,2%
	Bachelor	14	2,2%
	Candidate	44	7,1%
	Research or PhD	3	0,5%
Valid – sports active		625	100,0%
Not sports active		434	
Total		**1059**	

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