**Supplementary Online Content**

Comparison of the “11+ Kids” injury prevention programme and a regular warmup in children’s football (soccer): a cost-effectiveness analysis

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**Online supplemental material 1.** Estimation of Injuries and Costs Related to a Countrywide Implementation of the “11+ Kids” Injury Prevention Programme in Switzerland

**Online supplemental material 2.** Flow of Study Participants

**Online supplemental material 3.** Injury Charecteristics for the “11+ Kids” Intervention (INT) and Control (CON) Group and Comparison Between Groups

This supplementary material has been provided by the authors to give readers additional information about their work.

**Online supplemental material 1. Estimation of Injuries and Costs Related to a Countrywide Implementation of the “11+ Kids” Injury Prevention Programme in Switzerland**

|  |  |  |
| --- | --- | --- |
| **1** | **Costs for printing and delivering the “11+ Kids” manual** |  |
|  | Printing costs per item [CHF] | 3.00 |
|  | Envelop per item [CHF] | 0.05 |
|  | Shipping costs per item [CHF] | 1.00 |
|  | **Cost per unit including shipping [CHF]** | **4.05** |
|  | **Total costs for the manuals [CHF]** (i.e. CHF4.05 x 3533 coaches x 1.5 inflation factor) | **21 463** |
| **2** | **Costs for “11+ Kids” education courses** |  |
|  | Total number of players in Switzerland | 58 622 |
|  | Estimated number of medically treated football injuries in children in Switzerland per yeara | 4986 |
|  | Estimated number of coaches in Switzerlandb | 3533 |
|  | Number of coaches per course | 20 |
|  | Number of instructors per course | 2 |
|  | Number of courses to reach all coaches | 177 |
|  | Duration of the course [h] | 1.5 |
|  | Travel time for coaches and course instructors [h] | 2 |
|  | Minimum wage per hour [CHF]c | 20 |
|  | Salary for the course instructors per hour [CHF] | 30 |
|  | Costs for food and drinks per person [CHF] | 15 |
|  | Opportunity costs per course [CHF] (i.e. 20 coaches x 3.5 h x CHF20) | 1400 |
|  | Salary for the course instructors per course [CHF] (i.e. 2 instructors x 3.5 h x CHF30) | 210 |
|  | Food and drinks for one course [CHF] (i.e. 22 persons x CHF15) | 330 |
|  | **Cost per course [CHF]** | **1940** |
|  | **Total costs for the courses [CHF]** (i.e. CHF1940 x 177 courses x 1.5 inflation factor) | **515 070** |
| **3** | **Website** |  |
|  | Development costs [CHF] | 12 000 |
|  | Maintenance per year [CHF] | 4000 |
|  | **Total costs for the website [CHF] (i.e. CHF12 000 + 5 x CHF4000)** | **32 000** |

The table presents costs for printing and delivering the manual, organizing education courses for the coaches, as well as developing and maintaining a website to host the digital version of the manual.

abased on the injury rate in our study and the number of players in Switzerland

bbased on the coach/player-ratio in our study and the number of players in Switzerland

cin some parts of Switzerland there is a statute for a minimum wage (see Josi, P. and R. Jutzet. Medienmitteilung des Bundesgerichts: Urteil vom 21. Juli 2017 (2C\_774/2014, 2C\_813/2014, 2C\_815/2014, 2C\_816/2014). [23.10.2017]; Available from: https://www.bger.ch/files/live/sites/bger/files/pdf/de/2C\_774\_2014\_2017\_08\_04\_T\_d\_11\_42\_42.pdf.)

Allocated to intervention group

n = 24 clubs

n = 40 teams

Received “11+ Kids” intervention

Lost to follow-up

n = 2 teams due to time constraints

 including n = 31 players

Analyzed

Intervention group

n = 37 teams

including n = 614 players

Analyzed

Control group

n = 25 teams

including n = 388 players

Lost to follow-up

n = 6 teams prior to the start of the studya

n = 2 teams due to time constraints

 including n = 134 players

Allocated to control group

n = 23 clubs

n = 33 teams

Followed during course of season

Refused to participate

n = 799 clubs

Assessed for eligibility

n = 846 clubs

Randomized

n = 47 clubs

aFour of the coaches stated that they hoped to be allocated to the intervention group and refrained from participation after they were randomized to the control group. Two coaches did not give a reason why they dropped out.

**Online supplemental material 2. Flow of study participants**

Online supplemental material 3. Injury Charecteristics for the “11+ Kids” Intervention (INT) and Control (CON) Group and Comparison Between Groups

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **INT (n = 20 injuries)** | | | **CON (n = 33 injuries)** | | |  |  | **% likelihood effect is beneficial | trivial | harmful** |
|  | **N** | **IID** | **%** | **N** | **IID** | **%** | **HR (95% CI)** | **Inference** |
| **Location** |  |  |  |  |  |  |  |  |  |
| Foot | 6 | 0.14 | 30.0 | 6 | 0.18 | 18.2 | 0.74 (0.23, 2.18) | unclear | 52.4 | 31.3 | 16.3 |
| Ankle | 2 | 0.05 | 10.0 | 9 | 0.28 | 27.3 | 0.17 (0.03, 0.71) | very likely beneficial, most unlikely harmful | 97.6 | 2.0 | 0.4 |
| Knee | 3 | 0.07 | 15.0 | 4 | 0.12 | 12.1 | 0.53 (0.13, 2.40) | unclear | 66.5 | 20.4 | 13.1 |
| Finger/hand/wrist/arm | 2 | 0.05 | 10.0 | 5 | 0.15 | 15.2 | 0.28 (0.05, 1.43) | likely beneficial, very unlikely harmful | 87.5 | 8.8 | 3.7 |
| Hip/groin | 2 | 0.05 | 10.0 | 2 | 0.06 | 6.1 | 0.75 (0.10, 5.15) | unclear | 51.7 | 23.8 | 24.5 |
| Shoulder/clavicle | 1 | 0.02 | 5.0 | 3 | 0.09 | 9.1 | 0.24 (0.02, 2.34) | likely beneficial, very unlikely harmful | 84.3 | 8.7 | 7.1 |
| Head/face/neck | 1 | 0.02 | 5.0 | 2 | 0.06 | 6.1 | 0.37 (0.03, 4.07) | unclear | 73.2 | 12.4 | 14.3 |
| Thigh | 2 | 0.05 | 10.0 | 0 | N/A | N/A | N/A | N/A | N/A |
| Lower leg/Achilles tendon | 1 | 0.02 | 5.0 | 0 | N/A | N/A | N/A | N/A | N/A |
| Lower back | 0 | N/A | N/A | 1 | 0.03 | 3.0 | N/A | N/A | N/A |
| Upper trunk | 0 | N/A | N/A | 1 | 0.03 | 3.0 | N/A | N/A | N/A |
| **Type** |  |  |  |  |  |  |  |  |  |
| Joint/ligament injury | 3 | 0.07 | 15.0 | 11 | 0.34 | 33.3 | 0.20 (0.06, 0.68) | very likely beneficial, most unlikely harmful | 98.0 | 1.8 | 0.2 |
| Contusion | 6 | 0.14 | 30.0 | 6 | 0.18 | 18.2 | 0.71 (0.24, 2.16) | unclear | 55.3 | 28.1 | 16.6 |
| Fracture traumatic | 3 | 0.07 | 15.0 | 8 | 0.25 | 24.2 | 0.28 (0.07, 1.04) | likely beneficial, very unlikely harmful | 93.3 | 5.5 | 1.2 |
| Overuse | 3 | 0.07 | 15.0 | 4 | 0.12 | 12.1 | 0.53 (0.12, 2.36) | unclear | 68.1 | 19.3 | 12.6 |
| Muscle injury | 2 | 0.05 | 10.0 | 1 | 0.03 | 3.0 | 1.41 (0.13, 15.47) | unclear | 28.2 | 18.7 | 53.1 |
| Growth-related complaints | 2 | 0.05 | 10.0 | 0 | N/A | N/A | N/A | N/A | N/A |
| Abrasion | 0 | N/A | N/A | 2 | 0.06 | 6.1 | N/A | N/A | N/A |
| Other | 0 | N/A | N/A | 1 | 0.03 | 3.0 | N/A | N/A | N/A |
| Dental | 1 | 0.02 | 5.0 | 0 | N/A | N/A | N/A | N/A | N/A |
| **Mechanism** |  |  |  |  |  |  |  |  |  |
| Duel | 6 | 0.14 | 30.0 | 6 | 0.18 | 18.2 | 0.70 (0.23, 2.19) | unclear | 56.1 | 13.0 | 30.9 |
| Overuse/Growth | 4 | 0.09 | 20.0 | 5 | 0.15 | 15.2 | 0.60 (0.15, 2.14) | unclear | 64.1 | 11.7 | 24.2 |
| Foul | 4 | 0.09 | 20.0 | 3 | 0.09 | 9.1 | 0.94 (0.21, 4.37) | unclear | 38.1 | 24.4 | 37.4 |
| Contact with object | 2 | 0.05 | 10.0 | 4 | 0.12 | 12.1 | 0.34 (0.07, 1.88) | unclear | 76.5 | 9.1 | 14.4 |
| Collision | 1 | 0.02 | 5.0 | 5 | 0.15 | 15.2 | 0.14 (0.02, 1.21) | likely beneficial, very unlikely harmful | 90.2 | 4.3 | 5.5 |
| Falling | 0 | N/A | N/A | 6 | 0.18 | 18.2 | N/A | N/A | N/A |
| Running/Jumping | 1 | 0.02 | 5.0 | 3 | 0.09 | 9.1 | 0.24 (0.02, 2.39) | unclear | 82.9 | 8.4 | 8.7 |
| Kicking the ball | 2 | 0.05 | 10.0 | 0 | N/A | N/A | N/A | N/A | N/A |
| Header duel | 0 | N/A | N/A | 1 | 0.03 | 3.0 | N/A | N/A | N/A |

The table shows results of the mixed effects Cox-regression analyses (Hazard Ratio, HR; adjusted for team clustering, age, and age-independent body height), and outcomes of the magnitude-based inference approach (based on 90% confidence limits and threshold values for “benefit” HR < 0.77 and “harm” > HR 1.30). Qualitative descriptors: 0.5–5%: “very unlikely”; >5–25%: “unlikely”; >25–75%: “possibly”; >75–95% “likely”; >95–99.5%: “very likely”; >99.5%: “almost certainly”. The table shows the intervention effects regarding specific locations, types, and mechanisms of medically treated injuries.

Abbreviations: N/A: not applicable