

Results The median number of completed weekly reports was 45 (IQR 25–52). The annual IP for injury was 68% and for illness 77%. The injury IR was 6.9/1000 hours and the illness IR 9.3/1000 hours. The median time to injury was 19 weeks (95% CI: 10.5–27.4) and to illness 9 weeks (95% CI: 1.4–16.6). Most injuries occurred during training and 34% were classified as severe (≥ 21 days of time loss). An increased injury risk was observed among athletes in team sports (HR 1.88; 95% CI: 1.19–2.99), athletes with a previous severe injury (HR 2.37; 95% CI: 1.47–3.83) and male athletes (HR 1.76; 95% CI: 1.06–2.93). The most common illness type was infection (84%). Athletes in team sports (HR 1.64; 95% CI: 1.05–2.54) had a higher illness risk. One third of the athletes (34%; 95% CI 32.0–35.2) reported weekly that they felt anxious/depressed and 48% (95% CI 45.7–50.1) reported moderate or extreme pain every week.

Conclusions Paralympic athletes report a considerably high incidence of injuries and illnesses as well as pain and psychological complaints. This emphasizes the need to develop preventive strategies and optimize medical services for this heterogeneous athlete population.

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THE IMPORTANCE OF HEALTH MONITORING IN COMPETITIVE PARA ATHLETES: RESULTS OF THE GERMAN INJURY AND ILLNESS SURVEILLANCE SYSTEM

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10.1136/bjsports-2021-IOC.73

Background Injury profiles during Paralympic Games have been extensively studied, whereas longitudinal monitoring data of para-athletes are still sparse.

Objective Implementation of an injury and illness surveillance system in high-level Paralympic athletes.

Design Longitudinal monitoring of injuries and illnesses within the German National Paralympic Team.

Setting In preparation for the Paralympic Games in Rio de Janeiro 2016, all German elite athletes (n=178) were invited to take part in the weekly monitoring program using the Oslo Sports Trauma Research Center Questionnaire. The prevalence data on injury and illness were extracted and analysed with regard to age, sexes, impairment, sports and training volume. Acceptance of the program was evaluated at the end.

Patients (or Participants) 58 athletes comprised the final cohort (32 male, 26 female; main sports: paracycling (n=18), wheelchair basketball (n=12), swimming (n= 8). Main disabilities: SCI (n=19), limb pathologies (n=15), neurological impairments (n=17).

Interventions (or Assessment of Risk Factors) Prospective cohort study.

Main Outcome Measurements Weekly prevalence of injuries and illnesses, injury rate per 1000 athlete-days.

Results With a weekly response rate of $92.4 \pm 8.5\%$, 10.927 athlete-days were recorded with 306 (199) training-days being lost due to illnesses (injuries). The weekly prevalence of all health problems was 26% (95% CI 23% - 29%). Female

athletes had a higher prevalence (30.6%) compared to males (22.4%). The number of substantial complaints did not change over time, whereas the overall prevalence declined. Wheelchair athletes had higher incidence rates for gastroenterological problems, urinary tract infections and neurological complaints as well as higher rates of shoulder and elbow injuries. The participating athletes reported a high satisfaction with the weekly monitoring program.

Conclusions The weekly prevalence of overuse injuries and illnesses in Paralympic athletes is high, even early in the season, and varies substantially between handicaps and disciplines. Illnesses seem to be even more important than injuries.

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INJURY RISK IN SCHOOL CHILDREN WITH PROBABLE DEVELOPMENTAL COORDINATION DISORDER OR ATTENTION DEFICIT HYPERACTIVITY DISORDER

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10.1136/bjsports-2021-IOC.74

Background Sport and recreation-related (S&R) injury burden is high in adolescents (ages 13–19; incidence proportions (IP) ranging 29.4–40.2 injuries/100 students/year). There is a paucity of S&R injury data in children (<13 years). Individuals with Developmental Coordination Disorder (DCD) and/or Attention Deficit Hyperactivity Disorder (ADHD) may have a higher risk of injury; however, the focus has not been S&R injury or children in these studies.

Objective To examine S&R injury risk in school children, comparing typically developing children to those screening positive for probable (p) DCD and/or ADHD.

Design Cross-sectional study.

Setting Elementary schools in Calgary, Canada.

Patients (or Participants) In total, 681 students (grades 4–6; ages 8–13) from 33 randomly selected schools were recruited.

Interventions (or Assessment of Risk Factors) Children were screened for pDCD and/or pADHD through the DCD Questionnaire (DCDQ'07) and the Vanderbilt ADHD Rating Scale (VADPRS), respectively.

Main Outcome Measurements S&R participation and one-year injury history (medical attention and time loss) were child/parent/guardian reported on a survey.

Results The overall S&R IP was 28.2 injuries/100 participations (95%CI: 24.8–31.6). The injury rate (IR) was 2.43 injuries/1000-participation hours (95%CI: 2.06–2.85), with no significant differences between typically developing children and those screening positive for pDCD and/or pADHD. The IR for typically developing children was 2.2 injuries/1000-hours (95%CI: 1.79–2.68), 3.13 (95%CI: 2.21–4.42) for pDCD, 2.82 (95%CI: 1.29–5.34) for pADHD, and 2.93 (95% CI: 1.52–5.12) for children with pDCD and ADHD. Compared to typically developing children, children with pDCD [adjusted odds ratio (OR) = 1.08; 95%CI: 0.64–1.84], pADHD (OR = 1.14; 95%CI: 0.53–2.45), and pDCD/ADHD (OR = 1.24; 95%CI: 0.58–2.65) were at no greater risk for S&R injuries.