From research to practical implications in Paralympic Sports Medicine

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- The Sports-Related Injuries and Illnesses in Paralympic Sport Study (SRIIPSS)
- One year prospective longitudinal study based on self-reports
- Estimate the annual incidence of sports-related injuries and illnesses among Swedish Paralympic athletes
- Explore risk factors and mechanisms based on athlete exposure
- Project leading to a PhD thesis 2019

Review – Sports-related injuries in athletes with disabilities

- Critical review with systematic literature search
- Summarized current knowledge of the epidemiology of sports-related injuries in athletes with a disability and described their characteristics, incidence, prevalence, and prevention strategies
- 15 retrospective studies, 10 prospective studies
- The methodologies, injury definitions, populations and prevalence/incidence varied widely between the studies

Review – Sports-related injuries in athletes with disabilities

- Few studies had:
  - longitudinally assessed the epidemiology over time
  - assessed sports-related and impairment related risk factors
  - reported injury severity and prevention

To move towards prevention, comprehensive epidemiological research is required

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- Established methods to monitor athletes’ health
- However, one method does not fit all!
- Paralympic athletes’ specific needs have to be accommodated
- Develop a method targeted to Paralympic athletes
- Qualitative study aiming to explore Paralympic athletes’ perceptions of experiences of sports-related injuries
Paralympic athletes’ perceptions of sports-related injuries

- Individual interviews with Swedish paralympic athletes
- 7 women and 11 men (18-40 years, mean age 27 years)
- Vision impairment (n=8), intellectual impairment (n=1) and physical impairment (n=9)
- Phenomenography – developed within educational research
- Different explanatory models of perceptions and understandings of how individuals make sense of a phenomenon

Paralympic athletes' perceptions of sports-related injuries

- Sports-related injuries in Paralympic athletes are complex and multifactorial
- Differ in several ways from abled-bodied athletes
- Factors such as pain, guilt, awareness, concern, incapacity, inequality are considered by the athletes themselves
- Three areas: the causes, the consequences and the possibilities to prevent sports-related injuries
- Most important – need to consider the athletes’ own perspectives!

The Sports-Related Injuries and Illnesses in Paralympic Sport Study (SRIIPSS)

- Data collection based on existing research and Paralympic athletes’ own perceptions of experiences of sports-related injuries
- Three factors:
  - Long-term prospective study
  - Specific to Paralympic athletes
  - Self-report data

An eHealth application for self-reports in Paralympic Sport

- Develop and test a weekly e-diary for self-reports of SRIIPS in an eHealth application for Paralympic athletes
- Adapted to persons with visual, intellectual and physical impairments
- Four-week pilot study, 28 athletes with vision (n=11), physical (n=15) and intellectual impairments (n=2) representing 11 sports
- Test of feasibility and usability

An eHealth application for self-reports in Paralympic Sport

- A weekly e-diary for self-reports of:
  - injuries and illnesses
  - pain, anxiety, generally well-being, sleep
  - training load
- Survey items formulated for use among able-bodied athletes adapted to Paralympic athletes

An eHealth application for self-reports in Paralympic Sport

- Injury and illness definitions explained in more detail to suit Paralympic athletes
- eHealth application adjusted to visually impaired athletes
- Important to include illnesses and overuse-related health incidents
The Sports-Related Injuries and Illnesses in Paralympic Sport Study (SRIIPSS)

- Prospective longitudinal study (52 weeks) is completed
- 107 Swedish Paralympic athletes included
- 72% weekly response rate
- 453 new incidents reported
  - 199 injuries
  - 254 illnesses
- Also, data at baseline (prevalence, 1 year back) and psychological profiles
The Sports-Related Injuries and Illnesses in Paralympic Sport Study (SRIIPSS)

- 31% of athletes reported a severe injury during the past year (>3 weeks loss of training)
- 78% overuse injuries (most common in goalball and wheelchair basketball)
- 14% of athletes reported a severe illness during the past year (>3 weeks loss of training)
- Illnesses most common in para cycling and para swimming, and age below 30 years
- Association between injury and pain in daily activities, illness and being female and anxiety
For the future...

- Sports-related injuries and illnesses exist!
- eHealth-based monitoring of Paralympic athletes:
  - Feasible and usable
  - Can be used to longitudinally monitor athletes’ health
  - Support and ongoing data follow-up recommended during the surveillance period
  - Transfer of knowledge to athletes, coaches, trainers, medical staff
  - Platform for future preventive studies
Thank you for your attention!
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