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From research to practical implications in Paralympic Sports Medicine

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From research to practical implications in Paralympic Sports Medicine

- 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

Fagher K, Jacobsson J, Dahlström Ö, Timpka T, Lexell J. The Sports-Related Injuries and Illnesses in Paralympic Sport Study (SRIIPSS): A study protocol for a prospective longitudinal study. BMC Sports Sci Med Rehabil, 2016



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

Fagher K, Lexell J. Sports-related injuries in athletes with disabilities. Scand J Med Sci Sports, 2014



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

Fagher K, Lexell J. Sports-related injuries in athletes with disabilities. Scand J Med Sci Sports, 2014



From research to practical implications in Paralympic Sports Medicine

- 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
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Paralympic athletes' perceptions of sports-related injuries

- Individual interviews with wedish paraympic 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

Fagher K, Jacobsson J, Dahlström Ö, Timpka T, Lexell J. Paralympic athletes' perceptions of sports-related injuries . Eur J Sport Sci, 2016



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!

Fagher K, Jacobsson J, Dahlström Ö, Timpka T, Lexell J. Paralympic athletes' perceptions of sports-related injuries . Eur J Sport Sci, 2016



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

Fagher K, Jacobsson J, Dahlström Ö, Timpka T, Lexell J. The Sports-Related Injuries and Illnesses in Paralympic Sport Study (SRIIPSS): A study protocol for a prospective longitudinal study. BMC Sports Sci Med Rehabil, 2016



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

Fagher K, Jacobsson J, Dahlström Ö, Timpka T, Lexell J. An eHealth Application of Self-Reported Sports-Related Injuries and Illnesses in Paralympic Sport: Pilot Feasibility and Usability Study. JMIR Hum Factors, 2017.



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



Fagher K, Jacobsson J, Dahlström Ö, Timpka T, Lexell J. An eHealth Application of Self-Reported Sports-Related Injuries and Illnesses in Paralympic Sport: Pilot Feasibility and Usability Study. JMIR Hum Factors, 2017.



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
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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





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Thank you for your attention!
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