Rina Meha

An after-school football session transiently improves cognitive function in children

What did they do?

This study evaluated the effects of an after-school football session on the attention and memory functions of 8–9-year-old children. The intervention group took part in 60 min after-school football training session, whilst the control group rested. The cognitive testing was completed at three different time points (before training session, immediately after session, and 45 min following the session and compared between the groups. Cognitive performance was measured using validated tests for selective visual attention, and short-term and long-term memory.

Why is it important?

This research is significant as it emphasizes how football might enhance children's cognitive abilities. However, the lack of noticeable cognitive benefits 45 minutes after the session suggests a need for further studies to investigate the persistence of these cognitive advantages.

Things to consider.

Despite paper and pencil cognitive testing enables large group testing, they may lack the sensitivity of computer-based tasks, potentially affecting the cognitive results. Furthermore, the "practice effect" for repeated administration of the same cognitive tests at different time points could also influence the outcomes.

Take home message.

Participation in football sessions that consist of a warm-up activity and several game activities could elicit immediate cognitive benefits, specifically in attention and memory. Team sports like football can stimulate cognitive functions, however further research is needed to understand the duration and transition of these cognitive benefits.

Why I chose this article.

This study provides valuable insights into the relationship between playing football and cognitive performance and investigates the acute and delayed effects of participation in a football session on the cognitive abilities of children.

Provide the reference.

Magistro, D., Cooper, S. B., Boat, R., Carlevaro, F., Magno, F., Castagno, C., Simon, M., & Musella, G. (2022). An after-school football session transiently improves cognitive function in children. *International Journal of Environmental Research and Public Health, 20*(1), 164. https://doi.org/10.3390/ijerph20010164

Benedict Gondwe

Communication quality between the medical team and the head coach/manager is associated with injury burden and player availability in elite football clubs

What did they do?

A sub-study of the ongoing UEFA Elite Club Injury Study (ECIS) was conducted with 36 professional level teams from 19 European countries. The chief medical officers of each club completed a questionnaire at the annual post meetings of the ECIS. The questionnaire focused on the quality of internal communication within their respective clubs. They observed communication between medical team, head coach, fitness coach, chief executive officer and president or board. The quality of communication was scored on a 5-point Likert scale ranging from “very very good” = 5 and “not good at all” = 1 The overall level of quality of internal communication was calculated as the average of all these scores.

Why is it important?

Previous research has shown that communication, both verbal and non-verbal, is regarded as an important mediator of performance in team sport although, very few sports related studies have directly measured such communication. Recent studies have highlighted quality of internal communication as one of four common factors contributing to injuries and injury burden.

Things to consider

It is important to note that the study took only the chief medical officers views on internal communication which are subjective and may not represent the views of other team members. There is no mention on the validity of the questionnaire utilised in the study. The evaluations for this study took place at the end of each season thus the team’s performance that season could influence the responses. The findings from this study cannot be generalised to other areas of football such as youth, amateur and women’s football, nor other sporting codes. This research was limited to professional male football.

Take home message

Fewer injuries and greater player availability was associated with professional football teams with good quality internal communication. Team injury rates were influenced by the communication between the head coach and the medical team. Professional football teams that report low

communication quality between the fitness coach and the medical team had low player attendance at training.

Why I chose this article

A central component to well-functioning teams is communication and the same can be said regarding sports teams/organisations. In sports teams, prevention and management of sport injuries constitute a significant challenge, not only for the athletes but inclusive of the medical staff. This study adds knowledge to a domain not commonly explored and therefore presents a good foundation for further studies wanting to investigate qualitative outcomes, especially in elite football. Further studies could explore the construct of communication in more detail and expand on the characteristics of good communication (i.e. frequency, duration, targeted talks and perceived satisfaction of participants with the talks).

Reference

Ekstrand, J. *et al.* (2019) 'Communication quality between the medical team and the head coach/manager is associated with injury burden and player availability in elite football clubs', *British Journal of Sports Medicine*. BMJ Publishing Group Ltd and British Association of Sport and Exercise Medicine, 53(5), pp. 304–308. doi: 10.1136/BJSPORTS-2018-099411.

Rilind Obertinca

Extended Knee Control programme lowers weekly hamstring, knee and ankle injury prevalence compared with an adductor strength programme or self-selected injury prevention exercises in adolescent and adult amateur football players: a two-armed cluster-randomised trial with an additional comparison arm

What did they do?

This study aimed to evaluate the preventive efficacy of the extended version of the Knee Control programme compared with an adductor strengthening programme and a comparison group using a self-selected programme (self-selected prevention exercises) in young amateur and adult male as well as female football players.

Why is it important?

Findings from this study imply that an extended version of the Knee Control programme may reduce by one-third the incidence of hamstring, knee, or ankle injuries compared with a self-

selected programme. However, no significant difference in injury incidence was seen between the extended Knee Control and the adductor programme.

Things to consider

Even though this study reached its required sample size, the high drop-out rate could affect understanding of the real potential of the Knee Control. Moreover, a considerable number of adverse events (pain or discomfort when performing prevention exercises) were reported by the players. Specifically, 10.8% in the extended Knee Control group, 23.4% in the adductor group, and 20% in the comparison group.

Take home message

This study showed promising results on the effectiveness of the Knee Control programme in reducing lower limb injuries (hamstring, knee, and ankle). However, investigating the Knee Control in a larger cohort will enable making a comprehensive evaluation of its potential.

Why I chose this article

This was the first study to compare an injury prevention programme with two control groups (both using prevention strategies). This study presents a good model in comparing prevention programmes versus other self-selected prevention strategies as a control group. However, this model may present a challenge for conducting extensive cohort investigations on injury prevention programmes in the future.

Provide the reference

Lindblom, H., Sonesson, S., Torvaldsson, K., Waldén, M., & Hägglund, M. (2023). Extended Knee Control programme lowers weekly hamstring, knee and ankle injury prevalence compared with an adductor strength programme or self-selected injury prevention exercises in adolescent and adult amateur football players: a two-armed cluster-randomised trial with an additional comparison arm. British journal of sports medicine, 57(2), 83–90. Link: https://doi.org/10.1136/bjsports-2022-105890

Ana Ukaj

Cohort profile: the Swedish study of SUDden cardiac Death in the Young (SUDDY) 2000-2010: a complete nationwide cohort of SCDs

What did they do? This cohort included all SCD (sudden cardiac death) victims <36 years of age in Sweden during 2000-2010. For each of the 903 cases, there were also five population-based

controls, along with the parents of the cases and controls, for a total of 15 633 individuals. The control group was selected to match sex, year of birth, and geographic residence at the time of death. Data were collected from several mandatory national registries: the National Patient Registry, the Medical Birth Registry, the Prescribed Drug Registry, the Cause of Death Registry, and the Multigenerational Registry. These data were combined with socioeconomic data from Statistics Sweden.

Autopsy report, medical records, ECGs, parental information, and biological samples were collected from SCD victims.

Results: Of 903 cases, 609 (67%) were male and 294 (33%) were female with SCD aged 0 – 35 years between 2000 and 2010. 603 cases (67%) underwent forensic autopsy, and 186 (21%) underwent clinical autopsy. 105 cases (79.5%) were resuscitated before the arrival of the emergency medical services. The incidence of SCD in the age group 1 to 35 years was 1.3 per 100 000 person-years and 1.8 in persons aged 15 to 35 years. Of 62 persons who died during physical activity, 21 were competitive athletes (one woman) and 41 were recreational athletes (four women). The three most common diagnoses were sudden arrhythmic death syndrome (SADS), hypertrophic cardiomyopathy (HCM), and arrhythmogenic right ventricular cardiomyopathy (ARVC).

Hospitalization occurred in 562 (62%) of cases and an outpatient visit in 651 (81%) of cases. An outpatient visit 5 days before death was noted in 50% of cases.

Molecular autopsy revealed ARVC as the cause of death in 18 cases.

Why is this article important? In this national cohort study, data from several existing registries were combined. From the results of these sources, it appears that by linking different registries and making medical and forensic data available, it is possible to determine the real incidence of SCA/D and to estimate the epidemiological importance of sport-related SCA/D.

Things to consider? This study highlights the importance of the presence of symptoms in SCD cases before the cardiac event. Early recognition of signs and symptoms, such as dizziness and syncope before SCD, can identify the population at risk. In addition, it shows the importance of developing clinical – based registries at the national level to identify the circumstances of SCD.

Take home message: Mandatory reporting of SCD cases at the national level is beneficial to develop appropriate preventative strategies.

Why I chose this article? This study was selected because the methodology used in this paper was developed and implemented in a well-defined manner. In this paper, different data sources were considered to provide detailed information about each case of SCD, which helped me to develop new ideas for the target cohort of my PhD thesis.

References: Stattin EL, Hagström E, Dahl N, Strömsöe A, Delgado-Vega AM, Klar J, Svennblad B, Börjesson M, Wisten A. Cohort profile: the Swedish study of SUDden cardiac Death in the Young (SUDDY) 2000-2010: a complete nationwide cohort of SCDs. BMJ Open. 2022 May 10;12(5):e055557. doi: 10.1136/bmjopen-2021-055557.

Edgar Schwarz

Cold water immersion of the hand and forearm during half-time improves intermittent exercise performance in the heat.

What did they do?

This experimental study investigated the effects of half-time cooling procedure on body temperatures (rectal Tr, skin Ts), performance (mean & maximum power output) and subjective ratings (rating of perceived exhaustion, thermal sensation/comfort) in an intermittent cycling protocol in the heat (33° C, 50% relative humidity). In a randomized crossover design, eleven participants performed 30 min of the cycling protocol, replicating demands of intermittent team sports. Immediately after the session they performed 15 min of hand and forearm cool water immersion (15-17° C) or a passive rest and repeated the cycling protocol.

Why is it important?

Cooling interventions have been shown to be successful in a number of approaches, but often use protocols that are not applicable to elite team sports. This is due to an expected dose-response relationship, in that a maximized cooling regime will lead to the biggest effects. Research on applicable cooling interventions, regarding time, cost and equipment restrains in elite team sports is rare. This study showed that such an applicable cooling intervention can be successful in lowering heat strain (Tr & Ts) and improve performance as well subjective ratings of perceived exhaustion and thermal sensation/comfort.

Things to consider.

Although it seems promising to be able to reach significant cooling effects with such a low volume intervention, it needs to be questioned whether these effects can be transferred to an actual field setting. Further a placebo effect is plausible in this study design, because no effort was made to use a placebo intervention in the control condition. Recent investigations on cold water immersions including placebo treatments have shown that this needs to be considered. The authors of this paper conclude themselves, that the cycling protocol here does not necessarily replicate a football match in hot conditions where different pacing strategies could evolve. Considering the small sample size, it would have been interesting to look at individual responses to the intervention, but these were not displayed by the authors.

Take home message?

Previous investigations often focussed only possible performance benefits and found that low dose cooling interventions are not effective. In contrast, the current investigating suggests that a low cooling dose could be sufficient to receive the desired effect of lowering heat strain of athletes and even performance. A possible mechanism underlying this may be the large potential area for heat transfer in the hand (especially palm) and arm (high surface area-to-mass ratio, arteriovenous anastomoses (AVA) in the hands, superficial veins up to the elbow).

Why did I choose this article?

This study justifies the investigation of applicable lower dose cooling protocols in the field setting.

Reference

Iwahashi M, Chaen Y, Yanaoka T, Kurokawa Y and Hasegawa H (2023), Cold water immersion of the hand and forearm during half-time improves intermittent exercise performance in the heat. Front. Physiol. 14:1143447. doi: 10.3389/fphys.2023.1143447

What did they do?

Following robust consensus methods and the Core Outcome Measures in Effectiveness Trials (COMET) guidelines, this study developed a Football injury inciting circumstances classification system (FIICCS) for practitioners and researchers to systematically report the inciting circumstances in football. The system comprises five domains: contact type, running activity, ball situation, session details and contextual information, and also distinguishes between core set (essential reporting) and optional set (additional details). The core set constitutes the agreed

minimum information required for reporting on the inciting circumstances. The optional set allows details that would help towards a deeper understanding of the inciting circumstances. This structure is not excessively time demanding in application and in the meantime ensure not missing key information.

Guangze Zhang

Development of a standardised system to classify injury-inciting circumstances in football: the Football Injury Inciting Circumstances Classification System (FIICCS)

Why is it important?

Injury risk in football is multifactorial. Although there is a consensus on data collection procedures for football injuries which has been widely put into application, the issues of inconsistent reporting on inciting circumstances impedes the knowledge of detailed injury mechanisms and further prevention strategies. The presented classification system could encourage sufficient reporting consistency, which further benefits identifying injury factors in specific cases and enables comparing and generalizing findings across studies.

Things to consider

The reliability of the system might be reduced in some situations such as when evaluating running intensity without appropriate instrumentation (e.g., GPS tracking devices). The FIICCS may not be applicable at lower playing levels where the medical and support staff availability is limited. Besides, in this study, recruiting panellists from the network of the authors might have led the panel to be formed by experts whose opinions are similar to authors (i.e., panel diversity is compromised).

Take home message

Contact type, physical activity, ball situation, and session details are indispensable information in the reporting of inciting circumstances. The description on the type of kick (e.g., inside kick, outside kick, back heel) performed at the time of injury is important. Because each type involves different movements, and this information can be used to understand the injury mechanism and inform rehabilitation protocols.

Why I chose this article

Understanding the circumstances and the activities performed at the time of injury is important to identify potential mechanisms, hypothesise causal relationships and eventually develop corresponding injury prevention strategies. This study incorporates the expertise of both experienced practitioners and researchers to bridge the knowledge gap of appropriately classifying injury-inciting circumstances in football.

Reference:

Aiello, F., McCall, A., Brown, S.J., Serner, A., Fortington, L.V., Huurman, S.A.E., Lewin, C., Nagao, M., O'Brien, J., Panossian, A. and Pruna, R., 2023. Development of a standardised system to classify injury-inciting circumstances in football: the Football Injury Inciting Circumstances Classification System (FIICCS). Sports medicine, pp.1-14