

New Approaches for Dissemination and Implementation of Sport-Science Research Outcomes

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Readers of the *International Journal of Sports Physiology and Performance (IJSP)* will be familiar with the requirement to highlight the practical applications of a study. Typically, the practical application section comprises a short series of statements detailing how the outcomes can be applied in one or more sport settings (eg, field or court training, in the gym, competitions, recovery, and/or more broadly in athlete-development pathways) for the direct benefit of the athlete and/or coach. However, the value of research can be realized in other practical settings or more broadly for the benefit of others, in addition to the immediate beneficiaries.

Rather than addressing the issue of dissemination and implementation after a study has been completed, it is prudent to consider these elements throughout the entire life cycle of a research study. Dissemination and implementation should be discussed and planned during the formulation of the study involving all stakeholders. The key issues to address are the main outcomes of the study, expected practical applications, identifying the primary beneficiaries, the format and timing of dissemination, and, importantly, what the broader outcomes are for the sport, team, or program. We note that there is a wide range of both internal (eg, institute, sporting team, or faculty program) and external (eg, national or international sporting organization, private sector, or funding agency) partners. So all discussions should be customized according to individual project requirements.

The specific dissemination questions to consider are

- What is/are the main message or messages emanating from the study?
- Who is/are the intended beneficiaries (eg, athletes, coaches, sports scientists, researchers, national or international federations or organizations)?
- What is the method of dissemination (eg, online, in person, email)?
- When are the outcomes disseminated (eg, on completion of the study, at the time of online publication, at a scientific conference, or at a designated time determined by the beneficiaries)?
- Are there restrictions on release of the key information (eg, restricted dissemination within the program or organization or broader dissemination in the form of open-access publication)?

These questions should be addressed prior to the commencement of the study and again on completion of data collection or experimentation, to ensure the agreed strategy and timeline still suit all parties.

Implementation is a well-established professional field in other industries. A good example is the health care sector, where implementation of clinical and biomedical research is the focus of specific university programs. Although there are some examples of organized implementation strategies in sport science and sports medicine,¹ these are relatively infrequent and rely more on individual researcher and practitioner initiative rather than being formulated in advance during the project and manuscript preparations. Of course, high-level sporting programs are subject to unexpected events and changing priorities, and more flexibility in implementation is often required compared with the strict(er) requirements of clinical research.


What are the steps involved in developing a formal implementation plan? Given that this is a relative new initiative, it can be instructive to read implementation plans in other settings such as health care and health services.² Researchers should work with both sport scientists employed in the sport industry, and other staff with expertise in this area, to develop strategies to overcome barriers. Many good outcomes and ideas fail to materialize due to lack of engagement by organizations, officials, and coaches or lack of funding required to implement new approaches, training interventions, technology, or equipment. A well-prepared cost-benefit analysis will be important in discussions with sport, or also internally when preparing grant applications, to win the favor of faculties and other funders.

Clearly it is important to prepare and detail an implementation plan in a way that coaches, athletes, and sport scientists can be active participants in the process. Developing effective educational materials using data visualizations, infographics, and information presented in a short concise plain-language format for nonscientists is suggested. Another idea is to use professional society, advisory board, and other work groups who might be interested in implementing research outcomes. These groups could incorporate research outcomes into their policies, guidelines, position statements, or educational materials.

Strategies for dissemination and implementation should be identified and developed at the start of the project, when the overall project aims, experimental design, and methodologies are developed. It can be helpful to prepare a written study plan during the formulation of a research project that details these elements. The study plan should be revisited periodically during a larger project as plans change. This process should also detail roles and responsibilities of contributors to allocate tasks around dissemination and implementation and also inform the process of finalizing the (sometimes contentious) authorship list.

One of our own research areas of interest is heat acclimation. We are keen to focus more closely in the future on addressing both

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the dissemination and the implementation of practical and ecologically valid heat-acclimation protocols. There is long history of heat-acclimation research, although new approaches and knowledge continue to evolve. A key element to ensure the success of this work will be rapid and effective dissemination of future research outcomes and, ultimately, implementation in the field for the benefit of athletes and coaches. We encourage authors and readers of work published in *IJSPP* to develop new approaches to dissemination and implementation for the benefit of all involved in sport physiology and performance research.

References

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