# The Importance of Evidence-Based Practice and Collaboration in Sports Performance

Griffin Waller
Sports Performance Department, The University of Portland, Portland, Oregon, United States

The role of a Strength & Conditioning Coach (S&CC) has evolved tremendously over the years. Formerly, these positions were seen as novelties, with responsibilities centred solely around improving strength and conditioning qualities. Duties typically started and ended on the weight room floor, and due to a lack of research, decisions were mostly determined through anecdotal evidence lacking any scientific credibility. Furthermore, these positions generally operated in isolation, as integrated support teams had yet been established. As the profession progressed, the role of the modern S&CC has expanded. With significant emphasis placed on objective data, scientific evidence, and integration of technology, job responsibilities can stretch from not only applying strength and conditioning principles, but also being competent in biomechanics, human anatomy, exercise physiology, motor learning, sports nutrition, and sports psychology, to name a few. There has also been a recent surge in sport technology, increasing the need for S&CCs to be knowledgeable in sports science and analytics. This multi-faceted growth can be attributed to the increasing literature and improved availability of information, methods, modalities, and technology surrounding performance training. Additionally, with the development of integrated multidisciplinary performance teams, the modern S&CC no longer works in isolation. These diverse teams may now involve sport coaches, team doctors, sports medicine personnel, nutritionists, psychologists, and more. In order to not only keep up, but grow and evolve within this diverse profession, it's vital for S&CCs to lean on relevant research, while collaborating with both direct and indirect professionals to guide decision making.

If we don't have the right information, we can't make the right decisions. So how do we know what the "right" information is? And how can we make the "right" decisions? Adopting an evidence-based practice (EBP) should be the first step when determining the best intervention in any situation. EBP is a 3-step process first initiated in clinical health care that involved finding the best scientific evidence, using clinical expertise, and extrapolating that based on individual patient needs (1). Applying this to strength and conditioning would be to take a systematic approach to training athletes and clients based on the best evidence from current peer-reviewed research, in conjunction with professional experience and judgment (2). Given that research is constantly changing and evolving, S&CCs must be committed to learning new and varied information, while keeping an open mind when weighing the application of the evidence to their current situation.

Ultimately, EBP can provide S&CCs with strength of certainty regarding their decisions (2). However, there are no absolutes. What works for one athlete, population, or situation, may not work for a different athlete, or in a different situation. Context is key. What is most important regarding EBP, is that it's individual and unique to the given situation. It requires a dedicated approach to provide the best possible interventions, using the best possible evidence. However, this evidence isn't' evaluated in isolation. In addition to the research, individual experience and observation, in conjunction with the preferences and constraints of the environment, are just as important. Science can never tell us what to do, it can simply guide our decisions (3). This is where professional experience plays an integral role. Experience, observation, and insight enables S&CCs to make practical decisions in the absence of, or in addition to, research (2). This is where the art and science are equally important. Both scientific research and practical experience are necessary and complementary components of furthering EBP. Scientific research should provide the basis for practice, but practical experience should also lead to applicable research (2).

Developing the best EBP will require a combined approach, in which coaches and researchers work in collaboration to provide the greatest degree of insight into the effects of any intervention (3). With the integration of high-performance teams, S&CCs are now involved with multiple disciplines like never before. Decisions are no longer made in isolation and teamwork is essential for organizational success. Cultivating sustainable, integrated, and open-minded work relationships can heavily influence how we're assimilating important information. In a recent study published by the Journal of Strength and Conditioning Research, they examined perceptions around the use, implementation, and barriers to EBP in elite sport organizations within the US. All respondents stated research having the largest contribution to their performance training. Furthermore, it was determined that increased integration of staff, while enhancing understanding between player/coach contexts, may help to alleviate barriers to EBP (4). This underscores the importance of relationship-building and collaboration. And building a great culture relies on trust and transparency. With trust, there is open and honest communication, continuous improvement, and sustainable results (5). However, trust takes time. And for many, relationship-building at work can pose numerous hurdles. Whether it be personality, information, or application discrepancies, it's crucial we build rapport for a system to succeed. Team member relationships at work have been shown to be directly associated with organizational commitment and performance (6). Thus, team success can only be achieved if everyone believes in the process, is committed to their role, and puts the athlete's well-being above all. Effective communication is also a vital factor determining how an organization performs as a whole (7). This is essential in a process that involves a multidisciplinary team with varying degrees of understanding and education, who also may interpret information differently. Lastly, it's extremely important to allow open and honest feedback. Sharing information and an adopting an open-minded approach can lead to skills, techniques, and research being shared far more easily. Only through an open forum can we challenge our biases, be innovative, and learn and grow.

Ultimately, integrating an EBP and fostering quality professional relationships at work sets the foundation to optimize decision-making and minimize interference within the development of our athletes.

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