

## Introduction: Perspectives on Evidence-Based Practice



*Evidence-based practice* and *empirically validated* assessment and interventions have become catch-phrases in psychology. However, what do they really mean, and what minimum standard or threshold is necessary before “meaningful” evidence-based practice in applied sport psychology has been established? Can we even talk about evidence-based interventions, assessment, and practice unless the most rigorous criteria for what constitutes such evidence are used? Although the American Psychological Association’s quest for empirically validated approaches to intervention and outcome assessment is commendable and necessary and should be heeded, one must ask to

what extent this pursuit has become a reality and whether it is even attainable, especially in the realm of applied sport psychology. Can mental training interventions be considered evidence based if an outcome assessment fails to address the ecological validity of data emanating from the office only or on the basis of mere self-report? Without real-world monitoring and measurements in the context of salient stimuli and stressors, do we really know if an intervention is having more than a cursory effect? Because a large body of research contests the generalizability of data/responses obtained in the practice (office or lab) to the real world, is the field of sport psychology being too hasty when it professes the efficacy of certain interventions (e.g., mental imagery)? What about the longitudinal staying power of a particular mental training method? Have our empirically validated interventions really demonstrated their potency over time, and if so, on the basis of what evidence at the intra-individual athlete level? What is the minimum benchmark for constituting evidence? Does *evidence based* mean merely conveying the impression that one is “doing sport psychology” by pursuing intervention and efficacy research in a perfunctory manner? Or should the standard be much higher and based on hierarchical criteria that rank the potency of evidence in accord with accepted scientific guidelines, an approach this book advocates and advances?

Although “empirically validated” assessment and intervention should drive the practice of sport psychology, the reality is that few practitioners strictly adhere to scientifically based and validated mental training protocols or engage in outcome studies to assess the efficacy of the methods that they are using. This is understandable considering the practical constraints, financial realities, and methodological requirements associated with systematic or controlled approaches to applied sport psychology. In the context of private practice, it can be difficult to adhere to the rigorous demands of a scientifically derived intervention protocol and assessment model. This presents a problem for researchers seeking to generalize findings and protocols to the real world of applied practice. Without the participation of sufficient numbers of practitioners and athletes in using certain protocols, it is difficult to concurrently validate or replicate their utility and substantiate their efficacy. Since the essence of replication or validation is control, it is imperative that your “average” practitioner be given the tools and support necessary to participate in empirically validated approaches to treatment. This is vital to the credibility of the field of applied sport psychology.

Consequently, the main purpose of this book is to expose practitioners, educators, and students to an integrative, interdisciplinary, and systematized approach to athlete assessment and intervention. Too many sport psychology practitioners work within a vacuum; becoming too comfortable with approaches they were trained in, that may be, at least to a certain extent, no longer adequate or qualify as being evidence based. For example, mental imagery or visualization, the most widely advocated and used mental training method, may not even work for many athletes. Although practitioners may argue that meta-analyses of mental imagery research have shown this intervention modality to be efficacious, effect sizes have been moderate at best and based on group results. Interventions need to be individualized and based on intra-individual longitudinal outcome research using objective repeated measures that are cognizant of key personality and behavioral measures that drive performance and intervention amenability. Yet, practitioners continue to apply methods that are cursory, lack integration, and are not well controlled or rarely, if ever, tested for efficacy.

While grass-roots practitioners on the front line of applied sport psychology provide an invaluable service, in the rapidly advancing world of research and practice it is almost impossible to keep up with key findings and methods in numerous subfields of psychology that are highly relevant to athlete assessment and optimum performance. Although most credentialed sport psychology practitioners are required to participate in continuing education, course offerings have become so vast, diffuse, and even trivial that is easy to overlook or remain unexposed to sophisticated and potent procedures and research in the field. Crucial findings and approaches frequently go unnoticed

beyond press releases and superficial presentations on television or radio. Moreover, many, if not the vast majority, of training programs in applied sport psychology have training gaps or oversights that preclude practicing at the highest levels in the evidence-chain hierarchy. Most have yet to integrate advanced methods and instruments that are vital to evidence-based athlete assessment and interventions. There is also an information and training gap that needs to be closed if we are to practice high-level evidence-based applied sport psychology. The field must advance beyond anecdotal and antiquated assessment and practice models and integrate multifaceted approaches and modalities.

This manual will facilitate these goals by exposing practitioners in applied sport psychology to cutting-edge assessment methods, intervention procedures, and research that are critical to evidence-based practice. Importantly, practitioners will be given a systematized, evidence-based blueprint for becoming integrative practitioners. A longitudinal and ecologically valid approach to applied sport psychology that incorporates objective predictor and outcome measures that have been shown to reflect behavioral change and improvement will be emphasized. This book was also designed to foster interdisciplinary understanding, information sharing, and integrative approaches to athlete assessment, mental training, and outcome research. It is made necessary by the fact that while applied sport psychology is booming, the majority of practitioners work in relative isolation and in the context of unidimensional assessment and intervention approaches that may no longer meet the gold standard for client services.

Practitioners tend to practice the way they were trained and often go through an entire career married to an assessment and intervention approach that is either antiquated, obsolete, or needs to be augmented with the best emerging evidence-based practices. While many practitioners would welcome being able to upgrade their training and approach to practice, most are mired in the realities associated with having to survive as a practitioner. Time is scarce, with little available to keep up with advances across numerous subdomains of psychology. In the end, we all suffer from this state of affairs, especially coaches and athletes who are not being exposed to the most advanced approaches to assessment and intervention that are now available. As a result, a road map is needed; a blueprint for a truly integrative applied evidence-based sport psychology that is designed to disseminate critical emerging research in an efficient and understandable manner, as well as expose practitioners to sophisticated methods and procedures that need to be integrated into *all* practices. Practitioners need to be aware that sophisticated brain imaging techniques are revealing things that are important to decision making about intervention selection. They need to know about practices being used by psychologists in the clinical realm who are demonstrating that heart rate variability biofeedback may be *the* treatment modality of choice for dealing with competitive anxiety or that neurofeedback can be used in attempts to enhance focus in athletes.

Sport psychology practitioners must be exposed to and trained in validated alternative evidence-based interventions that can help athletes deal with psychologically mediated performance issues in the moment, on the playing field, including respiratory sinus arrhythmia (RSA) biofeedback, active-alert self-hypnosis, and manipulation of brain hemispheric activation to better control cognitive processing. They need to consider ecological validity and the temporal dynamics of an intervention or longitudinal impact of certain mental training methods before marrying themselves to an intervention approach. Advanced assessment and monitoring methods such as quantitative electroencephalography (qEEG) and in-the-field ambulatory wireless monitoring of psychophysiological processes are capable of revealing things that previously were unobservable, allowing a practitioner insight in athlete performance tendencies at the beginning of a working relationship with an athlete to better guide subsequent mental training and predict its course.

These are a few of the many methods that this book presents, information and approaches that are critical to high-standard evidence-based applied sport psychology.

This manual will also illuminate select research, data, and methods from various subfields in psychology that are relevant to applied sport psychology but have yet to be considered or adopted as standard procedures. An applied integrative practice template will be presented, making it possible for practitioners to draw on methods, procedures, research, and practical advice at the highest level in the evidence hierarchy. Practitioners will be taught how to work within an integrative model; how to acquire and share data for the greater good of their clients and thereby contribute to the advancement of evidence-based applied sport psychology. It will consolidate the most sophisticated methods, cutting-edge research, and potent data to give practitioners of any persuasion and training background practical insight into how to provide best-evidence-based approaches to applied sport psychology. The book will foster a systematized and interdisciplinary approach to athlete assessment and mental training and facilitate a move toward integrative evidence-based practice.

Too many books in sport and applied sport psychology merely reformulate, reword, or present what has already been published numerous times before. They lack innovation, continue to propagate myth and anecdote, and fail to provide practitioners with an integrated, coherent, and, importantly, evidence-based practice template. Such a template is missing in the landscape of publications in applied sport psychology and in the real world of practice. This manual fills that gap. The procedures, methods, and applications that will be advanced in this book have been field-tested on hundreds of athletes and practitioners.

One of the motivating factors in writing this book was the fact that practitioners who have gone through the American Board of Sport Psychology training and certification program continued to comment that this was the first time they felt that they were practicing sport psychology in a competent manner. Many of these practitioners held graduate degrees in sport psychology, postgraduate training, and certification in applied sport psychology and were active practitioners who worked with athletes. Yet, almost all expressed that something was missing. They admitted to a training gap, and even though they were credentialed on paper and were able to present themselves as competent and confident practitioners to their clients, privately they conveyed their reservations about their training, what they were doing, or not doing, and stated they needed a systematized approach to working with athletes in which standardized methods and procedures could be applied that took the guesswork out of consulting with athletes.

The evidence-based athlete assessment and intervention protocol upon which this book is based gave these practitioners a systematized approach to applied sport psychology that made sense. It includes tools that make practitioners confident and more effective, something that is crucial to building rapport with athletes and coaches and for demonstrating the efficacy of one's methods. Practitioners who are trained in these methods become part of a large network of sport psychology practitioner-researchers who have access to sophisticated methods, allowing them to contribute to the advancement of our knowledge of athlete psychological responding by submitting their findings and data to a database on athlete mind-body functioning. The methods taught in this book have been found to motivate practitioners to use evidence-based procedures, something that will help to advance the field.

It should be noted that although this book focuses on the American Board of Sport Psychology-Carlstedt Protocol (ABSP-CP), a system of athlete assessment and intervention that since originally being conceptualized (around 1995) has been applied to hundreds of athletes, leading to its validation; the main mission of this book is not to advertise or advocate for this model. Rather, the goal of this book is to raise awareness of critical issues in applied sport psychology pertaining to athlete assessment and intervention that all practitioners need to seriously contemplate and ultimately apply the herein recommended higher evidentiary approaches to the mental game. The

*Accountability Challenge* in Chapter 3 challenges practitioners to question and test their own approaches in each individual athlete with whom they work, and not rely on assessment and intervention approaches merely on the basis of group research findings or other influences of which they may be aware, such as educational background, training, or anecdotal beliefs.

The ABSP-CP approach provides a systematic methodological and procedural road map containing numerous validated assessment and intervention components. It is predicated not on claims, but demonstrated intervention efficiency and efficacy and valid and reliable comprehensive athlete assessments having strong predictive validity. It is an approach that should be considered by all practitioners. The protocol's greatest strength lies in its methodological and accountability framework.

## Active Participation

Readers of this practitioner's manual have the opportunity to actively participate in the presented American Board of Sport Psychology–Carlstedt Protocol in the form of *Practitioner*, *Practitioner-Researcher*, and *Student Challenges* that are highlighted in black boxes throughout this book. Practitioners, researchers, and students are encouraged to take the challenge by responding to questions that are posed or completing data analysis and specific experiential tasks. Doing so will not only be a learning experience but can count toward American Board of Sport Psychology certification. Readers are encouraged to submit their responses and analyses for credit (submit to: rcarlstedt@americanboardofsportpsychology.org).

The book is also replete with extensive case studies of actual athlete assessment and intervention, bringing to life the perspectives, models, methodologies, and procedures that are presented in the form of real data sets and their step-by-step acquisition, analysis, and interpretation. The availability of such “real” assessment, intervention, and performance data allows readers to reanalyze and interpret the provided information as though they were these case study athletes' sport psychologist.

Another unique component of the comprehensive athlete assessment and intervention protocol is that practitioners, researchers, and students can participate in the continued development of the ABSP assessment and intervention databases in the context of its Universal Applied Sport Psychology and Clinical trials and Accountability Challenge (see Chapter 3), the goal of which is to expand the already large and extensive database of athlete brain–heart–mind–body–motor and outcome responses emanating from the higher evidentiary assessment and intervention methodologies and modalities that are presented throughout this book.