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Models of performance excellence: Four approaches to sport psychology consulting

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ABSTRACT

The models of practice of four sport psychology consultants (Jon Metzler, Mark Aoyagi, Alex Cohen, and Artur Poczwardowski) are presented. While each model is distinct, collectively they illustrate the benefits of theoretically-grounded foundations to practice. The practitioners represented derive their models from multiple disciplines associated with sport psychology. *Pure Performance* emphasizes precise definitions of key terms and components while utilizing deliberate practice to develop authentic skills. *Mental FITness* is based on focus, inspiration, and trust to conceptualize and facilitate performance excellence. The *P.A.C.E.* model incorporates Perception, Activation, Concentration, and Execution and applies these elements to Performance Readiness Planning. The “5 Rs” model comprises Respond, Release, Replay, Recharge, and Refocus. The models are presented here for the purpose of demonstrating the breadth with which performance excellence can be conceptualized and facilitated. Implications for practitioners include examples of how theory guides the development of service delivery programs.

KEYWORDS

Interdisciplinary; models of practice; performance excellence; science to practice

In a multidisciplinary profession such as sport psychology, grounding applied intervention in sound theory is essential. Having a conceptual model or guide for the provision of service generates a plan for the questions we ask, the interventions we propose, and the interactions we have with our clientele (Andersen, 2005).

The foundation for this article was a symposium at the 2012 Association for Applied Sport Psychology Annual Conference titled, “Interdisciplinary Perspectives on Applied Sport Psychology: Five Approaches to Performance Excellence.” The symposium introduced the audience to several practitioner models highlighting different perspectives and approaches to sport psychology consultation. Following the presentation, and in the years since, the authors received multiple requests for additional information, hence the origination of this manuscript. The purpose of

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the original presentation, and therefore this article, was/is to demonstrate the ways we have utilized theory to develop models of practice. A full explication of each model would be a standalone article or even book. Thus, our purpose in sharing key components of our models side by side in a single article is to demonstrate the adaptability and creative uses of theory in building models of practice. Furthermore, purposeful selection of contributors who practice from interdisciplinary perspectives (e.g., sport science, psychology) occurred with a clear intention to elevate the conversation above simply what methods are used, or “which theory is better.” Rather, the focus of both the original symposium and now this article is on the wealth of knowledge and resources available to facilitate performance excellence from a variety of perspectives. We utilize the term performance excellence as an alternative to the more common usage of performance enhancement for two primary reasons: (a) enhancement implies a narrow focus on results, which is not our sole goal, and (b) excellence is both in the eye of the beholder (does not have to be defined solely by results) and broader (encompassing the person more holistically with both performance and life goals as desired by clients). Lastly, we want to acknowledge that these are not empirically validated models as has been called for in the literature (Aoyagi & Poczwardowski, 2011, 2012). While each element within the models is supported both theoretically and empirically, we have not scientifically studied the models holistically. Following the work of Poczwardowski and colleagues (Poczwardowski & Sherman, 2011; Poczwardowski, Sherman, & Henschen, 1998; Poczwardowski, Sherman, & Ravizza, 2004), each model was developed from the foundation of our personal core beliefs and values and filtered through our theoretical paradigms ultimately allowing for conceptualization of the client, developing intervention goals, and implementing interventions. These models are the core of our respective practices, and we also utilize contextual intelligence (Brown, Gould, & Foster, 2005) to determine what may work best in a given situation. Thus, we are flexible and adaptive to the needs of our clients and utilize other models and tools that remain consistent with our theoretical paradigms and values as warranted. The following are four examples of theory-driven, experientially-informed models for guiding the sport psychology consulting interaction.

Pure performance: An integrative approach to performance excellence —Jonathan N. Metzler¹

The pure performance approach draws heavily on the integration of theories of motivation, attachment, and interpersonal process. Specifically, the consultant understands from self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2000) that clients are innately motivated to fulfill a sense of belonging (relatedness), a sense of originating their own behavior (autonomy), and a sense of being

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able to influence their environment (competence). Through experience and an understanding of approach-avoidance competence motivation (Elliot & Dweck, 2005), the consultant prioritizes connection and autonomy-support, respectively, within the context of performance. The pursuit of performance excellence is facilitated through deliberate interpersonal processes.

The approach begins by acknowledging that performance is not simply a hypothetical construct. In actuality, performance is the operationalization of a hypothetical construct — skill or ability. Athletes' and performers' level of skill or ability can only be assessed indirectly by measuring performance. By treating performance as a measurement rather than a hypothetical construct, we can apply logic drawn from classic test theory (Novick, 1966) which states that any observed score on a measure is equal to true score plus error where true score represents the authentic, but hypothetical, level of a person. In other words, $\text{performance} = \text{skill} + \text{error}$, where skill represents a person's authentic, but hypothetical, level of skill on some variable. Importantly, skill may include multiple variables such as motor aspects (strength, endurance, etc.), cognitive aspects (pattern recognition, decision making, etc.), or an integration of motor-cognitive aspects (hand-eye coordination). Error reflects any other variables that could contribute to discrepancy between actual skill (i.e., true score) and observed performance such as weather, opponent, surface, referees, over-analysis, doubt, distraction, etc.

Given this foundation, the goal of performance excellence consultation is consistent display of authentic skill. Ideally, each performance — each trial or repetition of skill execution - represents the performer's authentic skill which allows for validation or correction on the next repetition. In reality, each execution likely contains impurities that pollute the display of skill (i.e., error). Thus, the goal of intervention is to help individuals display “pure” skill by identifying performance variables that can be self-regulated and offering strategies to limit “noise” during execution.

This “pure” performance goal is communicated directly with clients as the mechanism for attainment of performance excellence. Specifically, performers are challenged to (a) embrace the role of failure in skill development (Dweck, 1999, 2006, 2012) and (b) understand the paradox of self-control in skill demonstration - performance excellence can only be attained by learning the rhythm of taking control (self-regulation) and giving oneself autonomy (self-emancipation or acceptance). The role of the consultant is to serve as an exemplar of a secure base (Bowlby, 1969) from which performers can explore — intentionally and systematically.

Consultants must first lay the foundation with performers that failures, mistakes, or errors are to be embraced rather than avoided because although they may give an indication of current level of skill, if they can be attributed to controllable factors, they can be used as sterile indicators of adjustment. In fact, failures, mistakes, and errors when exhibited from a “pure” performance standpoint are encouraged because they help provide precise feedback for adjustments to be made. The consultant must remain highly attuned to the client because communication about failures and mistakes that jeopardizes the client's sense of belonging or autonomy create fundamental impurities that can interfere with the display of authentic skill.

If performers can be free to fail boldly, they increase the chances of executing authentically and providing rich information that can be used for correcting failures, thus ultimately resulting in skill development and enhanced performance (Dweck, 2006). Performers who understand this believe that every performance is an opportunity to display their authentic level of skill or competence for the purpose of development. Exposure is an opportunity to grow. Performers who do not understand this, perform with impurities (e.g., overanalysis, distraction) and thus display skill inauthentically. Ironically, the polluted performance likely disguises the precise area needed for skill development and delays performance enhancement.

Drawing from interpersonal theory (Benjamin, 1996a, 1996b, 2003, Benjamin & Critchfield, 2010), the consultant must be skilled at modeling the oscillation between exerting interpersonal control (i.e., taking autonomy) and peacefully accepting (i.e., supporting autonomy) with interpersonal warmth to foster internalization of the precise internal rhythmic processes ideal for performance excellence — dynamic shifting between self-control and self-acceptance. In this interpersonal context, control refers to communication toward another person for the purpose of telling her to be a certain way. For example, the statement, “bring your racket back, swing low to high, and follow through” would be coded as communicating to a tennis player how to be. In contrast, the statement, “you are ready” communicates precisely the opposite. With the latter statement, the tennis player does not need to make alterations and is free to execute without interference, therefore her autonomy is supported (see also Mageau & Vallerand, 2003).

Consultants and coaches who can model this type of interpersonal communication rhythm can help performers to internalize self-talk that mimics the same process. Consultants can challenge performers to influence execution through proper preparation and planning, including techniques traditionally advanced via mental skills training such as purposeful thinking, presetting of psychophysiological activation, identification of objectives to provide focal cues, mental rehearsal, and contingency planning. This deliberate approach to perspective and preparation is designed to afford performers the security to execute deliberately, ironically by letting go during execution. The “pure” performance approach may invoke additional thought on how traditional self-regulation (i.e., control) and contemporary mindfulness (i.e., acceptance) approaches can work synergistically rather than antagonistically in performance interventions.

Focus-inspiration-trust: Mental FITness for performance excellence — Mark W. Aoyagi²

The Mental FITness model identifies focus, inspiration, and trust as critical ingredients for conceptualizing and facilitating performance excellence. Not just a catchy acronym, this combination also roughly corresponds with Plato’s mind (focus), body

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(trust), and soul (inspiration). For performance excellence, performers are taught to focus their minds, trust their training and allow their bodies to perform, and connect their performance to a larger purpose that is inspiring and fulfilling for their soul. While focus, inspiration, and trust certainly do not account for all the psychological and emotional components of performance excellence, they are a pragmatic foundation for its development.

Focus

Focus is often used synonymously with attention and concentration to indicate selectively attending to task relevant cues. However, in Mental FITness issues with confidence, poise, composure, present moment awareness, mindfulness, resiliency, flexible thinking, and concentration are all conceptualized as issues of inappropriate or unskilled focus (McGuire, 2012). For example, problems with confidence are commonly a result of an inappropriate (oftentimes internal) focus, in which case performers would be taught mindfulness in order to not get caught up in their internal states (e.g., thoughts, emotions) and be able to focus on the appropriate environmental cues to facilitate performance (Jha, Krompinger, & Baime, 2007). Due to the brevity of this overview, the critical role of mindfulness within focus will be discussed with the understanding that there is much more that could be said on the topic.

Mindfulness encapsulates many of the core concepts in Mental FITness. Kabat-Zinn (1994) defined mindfulness as, “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (p. 4). A more elaborate definition of mindfulness was offered by Bishop et al. (2004) and included two components: self-regulation of attention and acceptance of one’s experiences in the present moment. Self-regulation of attention incorporates the skills of sustained attention (i.e., maintaining vigilance of prolonged periods of time), attention switching (i.e., flexibility of attention allowing for shifting of focus), and inhibiting elaborative processing (i.e., not getting caught up in ruminative thoughts about experiences and instead directly experiencing events). These definitions contain many of the conditions facilitating flow (Jackson & Csikszentmihalyi, 1999).

Inspiration

Inspiration addresses the “How?” and the “Why?” (see Haberl, 2012) of performance in terms of both breadth and depth. To be truly inspirational, the depth of one’s pursuit of excellence must extend beyond the desire for fame, glory, success, and even excellence itself (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Inspiration must connect to the core values of a person and the chosen purpose and meaning of his or her life. When this is achieved, “(values) permit actions to be coordinated and directed over long time frames” (Hayes, Strosahl, & Wilson, 1999, p. 206). As Ericsson (1996) suggested, expertise takes a long time to develop, and without inspiration it is unlikely that the dedication necessary for excellence will be maintained.

Furthermore, in order to have the essential courage to take the risks necessary to pursue performance excellence, it helps to have a purpose bigger than oneself (Aoyagi, 2011). Connecting the pursuit of excellence to the inspiration for life provides the motivation, energy, and commitment required of performance excellence (Hayes et al., 1999; Wrzesniewski et al., 1997).

The scientific foundations for inspiration are found in existentialist (e.g., Ronkainen & Nesti, 2017) and ACT frameworks (Hayes, Strosahl, & Wilson, 2012). Critical to existentialism is authenticity: being true to oneself and acting in accordance with core beliefs and values (Ronkainen & Nesti, 2017). An example of the use of existentialism is documented within English Premiership football (Nesti, Littlewood, O'Halloran, Eubank, & Richardson, 2012). Emphasizing cases containing critical moments (i.e., times when anxiety associated with changes in identity occur), the authors discussed how players must reassess their core values and align their beliefs with decisions and behaviors to successfully navigate critical moments. Ravizza (2002) also provided an example of existentialist perspective with a baseball player who was only able to successfully play in the major leagues after realizing he had other interests and desires in life than baseball. Finally, as alluded to above, the ACT perspective emphasizes that it is necessary to connect behaviors to values so that actions will persist when athletes are confronted with the inevitable suffering along the path to excellence.

Trust

Trust is perhaps the simplest and most straightforward aspect of Mental FITness, yet in many ways it is the most difficult and elusive to achieve. In the context of performance necessitating complex, automatic motor skills, Moore and Stevenson (1991) defined trust as “letting go of conscious controlling tendencies and allowing automatic processes, which have been developed through training, to execute the motor skill” (p. 282).

In order to develop trust, Moore and Stevenson (1994) stated that three psychological skills were necessary: concentration, confidence, and composure. This is where the foundational component of focus sets the stage for trust, as each of these skills are developed while learning focus. Interestingly, it is the mentality Moore and Stevenson (1994) identified as “necessary for skill *development* (e.g., self-monitoring, verbal cueing) [that] is counterproductive for skill *execution*” (p. 5). Fortunately, research on implicit motor learning (Button, MacMahon, & Masters, 2011) has provided insight into ways to train that avoid the self-monitoring which is problematic for trust, as well as offering suggestions for how to avoid the tendency for an ironic rebound process to cause the thoughts we wish to avoid to, in fact, become more prevalent.

Briefly and simplistically, the theory of ironic processes stated that the more people try to suppress (control) a particular thought, the more likely that thought is to occur (Wegner, 1994). This became known as ironic rebound, and there is electrophysiological evidence (i.e., Giuliano & Wicha, 2010) of its occurrence.



Figure 1. Mental FITness for performance excellence.

Understanding and accounting for the ironic process is critical because commonly taught sport psychology techniques for self-talk involve control methods such as stopping (i.e., suppressing) and changing thoughts. While there is evidence for the efficacy of these types of self-talk interventions (see Cox, 2012), an alternative approach with strong support is to accept whatever thoughts come to mind and be willing to feel whatever sensations and emotions arise (Hayes et al., 2012). Circumventing the ironic effect, this approach actually results in less distracting thoughts and facilitates trust.

An additional coaching technique to avoid getting entangled in thoughts and therefore build trust is implicit motor learning. The learning of skills without explicit verbal awareness is called implicit learning, and can be applied to motor skills giving us implicit motor learning (Button et al., 2011). Implicit motor learning typically involves providing performers with a distracting task while simultaneously teaching the motor skill. Evidence indicates that skills learned implicitly can be performed better under psychological (Masters, 1992) and physiological (Masters, Poolton, & Maxwell, 2008; Poolton, Masters, & Maxwell, 2007) stress/pressure as compared to explicit learning, and elite youth athletes learned better implicitly (Verburgh, Scherder, van Lange, & Oosterlaan, 2016). The development of an accepting attitude and implicit learning provide concrete examples of ways to help performers build trust.

Furthermore, and as a concluding example of how the elements of Mental FITness are interrelated (see Figure 1), implicit motor learning can be combined with focus training to capitalize on the constrained action hypothesis (CAH; Wulf, McNevin, &

Shea, 2001). In short, the CAH proposed that an internal focus interferes with automatic motor movements resulting in less effective movements. Instead, when focus is directed externally movements are unconscious and performance is enhanced. Therefore, teaching performers to utilize an external *focus* during motor execution is reinforced through their training in *trust*, while both of these skills are bolstered by performers' connection to their *inspiration*.

The P.A.C.E. sport psychology model — Alexander B. Cohen³

Another overarching framework for performance excellence can be referred to by the acronym “P.A.C.E.,” which stands for “Perception, Activation, Concentration, Execution” (Cohen, 2012). The P.A.C.E sport psychology framework provides a context for assessing and interpreting psychological variables that affect performance, and provides a model for facilitating Performance Readiness, a key to sustained performance excellence.

According to Sasha Rearick, U.S. Men's Alpine Ski Team Head Coach, performance is defined as on-demand execution of what has been learned (Nolting, 2011). Building on this definition, performance excellence can be defined as consistent on-demand execution of learned skills. Achieving sustained performance excellence requires thorough planning, continual monitoring of physiological capacity, and feedback regarding technical, tactical, and psychological skills for athletes to be appropriately prepared at targeted competitions. The P.A.C.E. model can be used as an organizing framework to identify and build these key psychological skills. Further, the P.A.C.E. model facilitates working with athletes at multiple levels, assessing underlying factors (identity, beliefs, values, resilience, etc.) that may facilitate or impair consistent use of these psychological skills.

In addition to working directly with athletes to facilitate performance excellence, collaboration with coaches to integrate psychological skill preparation into periodized training programs is recommended. The P.A.C.E. model provides an additional pathway to help coaches and athletes transfer technical, tactical, and psychological skills acquired in practice into competitive settings.

While each of the P.A.C.E. components can be addressed individually, the framework is most effective when viewed as an ordered sequence for both assessment and skill building. The first component, **Perception**, refers to an athlete's mindful awareness of thoughts and feelings about:

- technical, tactical, and psychological skills (e.g., emotional regulation, imagery, self-talk, etc.);
- performance environment;
- achievement goals (i.e., outcome and performance goals; Roberts & Kristiansen, 2010);
- identity, which refers to underlying factors such as core values, beliefs, resilience capacity, and interpersonal style. These underlying factors influence

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the athlete's appraisals, attributions, motivation, skill utilization and execution, adaptation to internal and/or environmental adversity, and approach to goal achievement.

The athlete's explicit and implicit perceptions serve as antecedents for emotion. Athletes' experience (and subjectively interpret) a range of pleasant and unpleasant emotional states, in which changes in physiological activation and accompanying action tendencies are often the most tangible indicators of internal emotional status (Vallerand & Blanchard, 2000).

Perceptions are, therefore, clearly linked to **Activation** (physiological arousal), which exists along a continuum of deep sleep to extreme excitation (Weinberg, 2011). Emotion-related activation can be tracked by assessing the athlete's Individual Zone of Optimal Functioning (IZOF). The IZOF represents the emotional experiences related to successful or poor performance (Cohen, Tenenbaum, & English, 2005; Hanin, 2000). Once determined, the IZOF is attained through use of emotional regulation skills (e.g., coping, mindfulness) as well as energy management skills—relaxation and activation—to achieve the desired level of physiological activation for performance. Finding the appropriate activation level is essential, not only for maximum energy availability, but also due to the effects of activation on concentration. For example, as physiological activation increases, attentional capacity often decreases (Moran, 2004). Further, anxiety and physiological arousal can affect visual attention, altering the way athletes identify and process visual cues (Janelle, 2008). In essence, if an athlete's activation level moves outside of his or her IZOF, it may cause inappropriate attentional focus and poor decision making (Weinberg, 2011). Since appropriate attention allocation cannot be overstated in determining performance outcome (Janelle, Coombes, & Gamble, 2010), athletes and coaches must be aware of the interaction between physiological activation and concentration.

Concentration is the athlete's ability to exert deliberate mental effort on what is most important in any given situation (Moran, 2011). Athletes need to selectively attend to relevant information, mindfully let go of potential distractions, and switch attention appropriately while coordinating several simultaneous actions (Bishop et al., 2004). Distractions can be particularly performance impairing for elite athletes because of the automaticity of their skills. Because these athletes have largely automated their technical skills as a result of extensive practice, they tend to have extra mental capacity available to devote to other concurrent tasks — thereby increasing distractibility (Moran, 2011). While a “wandering mind” may interfere with skill execution, athletes trained in mindfulness (an attentive, present-centered, nonjudgmental awareness) demonstrate greater cognitive resilience and enhanced attentional performance (Jha et al., 2015). Indeed, as noted by Csikszentmihalyi (1990), one of the characteristics of the “flow state” associated with performance excellence is complete absorption, the narrowing of awareness down to the key aspects of an activity. The P.A.C.E. model is an approach to achieving this level of concentration, facilitating on-demand skill **Execution** by helping athletes *focus on the right things, at the right time, every time*.

The practical application of the underlying P.A.C.E. model is then best accomplished via a Performance Readiness Plan (PRP; Cohen, 2016). The PRP allows

psychological skill execution to be tracked by incorporating observable behavioral markers as well as athlete self-report of goals, obstacles, and desired performance behaviors. Performance Readiness Planning incorporates “mental contrasting with implementation intentions” (Oettingen, 2014), a metacognitive strategy that provides people with knowledge or awareness of their own thoughts and mental images, combined with a behavioral plan in case obstacles are encountered in achieving goals. A typical scenario would involve discussion among an athlete, coach, and sport psychologist (ideally including observation of training and competition) to formulate the athlete’s unique Performance Readiness Plan (PRP). For example, if it is determined that greater task-appropriate concentration would benefit performance, and concentration is being affected by the athlete’s self-management of physiological activation, this will be written into the plan.

It is best to use the athlete’s own language in developing the PRP. In this case, the athlete’s goal for “energy” or “intensity” might be stated as “I want to be excited but also calm” or “I want my energy level to be a 7 out of 10.” The goal for concentration might be, “I want to focus on flow and rhythm as I see the target.” It is also critical to determine common obstacles athletes may experience in achieving the desired level of physiological activation or in maintaining task-relevant focus. For example, “Thinking about results makes me tense and I get too excited” (physiological activation obstacle) or “When I don’t trust it, I tend to think about my mechanics rather than letting myself see the target” (focus obstacle). The behavioral component of the plan would then be written as an “if-then” statement, e.g., “If I’m too amped up, I will take slow breaths and mindfully acknowledge this feeling” or “If I’m doubting myself and thinking about my mechanics, I will let my focus flow to the target.” Mentally contrasting the goal with the internal obstacle increases awareness of these states, making it easier to engage in more effective behaviors. It is relatively easy for experienced athletes, coaches, and sport psychologists to agree on observable behavioral markers of this process (e.g., body position, biomechanical refinement, visual fixation, facial expression, etc.). Athletes, coaches, and sport psychologists can then track and rate the quality of agreed upon behaviors specified in the plan. This provides a common set of reference points for discussion and intervention. An example might be ratings of Green, Yellow, or Red for behaviors related to focus or intensity, indicating how well the athlete engaged in actions connected to performance excellence.

Performance Readiness refers to the athlete’s ability to consistently execute a competitive plan. Therefore, the P.A.C.E approach to performance excellence, in conjunction with Performance Readiness Planning, can guide practice when working with individual athletes and can facilitate psychological skill development during training. Collaboratively, sport psychology consultants and coaches can work together to create an optimal learning environment that promotes mastering these psychological skills, making it easier for athletes to automatically execute their performance plans, thereby increasing the likelihood of performance excellence.

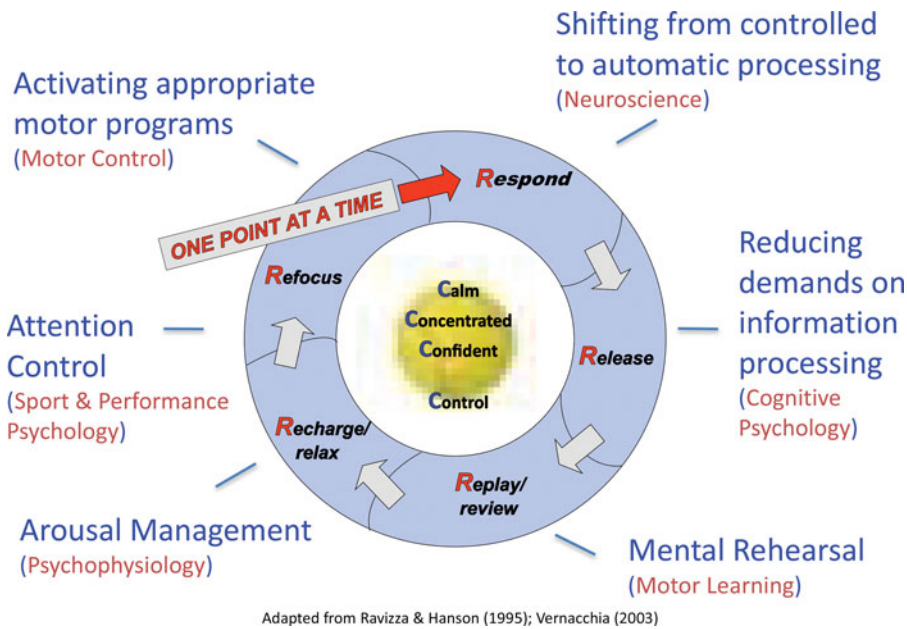


Figure 2. The “5 R’s” as a between-executions routine.

“Five Rs as a between-executions routine” — Artur Poczwardowski⁴

From the perspective of a practitioner, transforming both theoretical insights and empirical, data-driven content into a guiding model that is client-focused and practically useful is an art. Thus, serving the client in the capacity of a “translator” of highly technical and jargon-dense information can be enhanced by creating guidelines for how to communicate professional content to larger audiences (see Heath & Heath, 2007). Keeping these challenges in mind, the purpose of this section is to present a between-executions routine for sports (or contexts) with natural micro-breaks between and ongoing task and strategy execution bouts. While using the example of tennis, I will provide a step-by-step curriculum in an educational program on how to develop a “point-to-point” mental strategy between points. Note that this model (Figure 2), as an “entry product” used in semi-formal presentations to attract youth tennis academies and individual clients to systematic sport psychology consultation, could be easily adapted to fit the needs of other performances and contexts as well (e.g., martial arts, separate takes in acting). This “Mental Excellence Training Program,” (of which the 5Rs is but a piece) embodies the complexity of sport psychology service delivery (see Poczwardowski & Sherman, 2011), in which theory, data, and art serve as allies in attempting long-term behavior change.

The elements of the “5Rs for Tennis” are “Respond,” “Release,” “Replay,” “Recharge,” and “Refocus” built on the work of Ravizza and Hanson (1995) and Vernacchia (2003), which collectively aim at facilitating a mental state that could be

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characterized by the “4Cs” – “Calm,” “Concentrated,” “Confident,” and “Control” (Figure 2). Importantly, the 5Rs cycle is based on processes and mechanisms well supported in the relevant literature. Examples of theoretical and practical recommendations for introducing, implementing, and individualizing the 5Rs are: (a) general aspects of sport psychology service delivery (Brown, Pryzwansky, & Schulte, 2011; Poczwadowski et al., 1998; Vealey, 1988); (b) recommendations for the goals (outcomes) and methods (tools) of mental training (Ravizza & Hanson, 1995; Vernacchia, 2003); and (c) empirical evidence for the effectiveness of psychological skills in performance enhancement (e.g., Greenspan & Feltz, 1989). These are readily available in the sport psychology literature. These interdisciplinary connections between the applied purposes of the 5Rs and sport and exercise science principles derived from a number of related scientific disciplines (e.g., neuroscience, cognitive psychology, psychophysiology, sport psychology, motor learning, and motor control) are briefly presented below.

“Respond” involves the performance of a player’s pre-serve (or pre-return) mental state adjustment that gives him or her the best chance to execute the tactical plan for the next point.

Specifically, “Respond” (via pre-execution attention shift) can be used to achieve a state of trust in oneself and one’s ability to perform well on the upcoming task. Shifting motor control processes from controlled (upper brain centers [e.g., motor cortex]) to automatic (lower brain centers [e.g., basal ganglia]) can be viewed as a main goal during this phase. The classical principle of paralysis by analysis known as the Bliss-Boder hypothesis (see Schmidt & Wrisberg, 2008) and modern neuroscientific insights into motor control (e.g., Mink & Thach, 1991; Yarrow, Brown, & Krakauer, 2009) are examples of theoretical and empirical grounds for applied work.

“Release” occurs at the start of the between-point sequence and aims at regulating the physiological aspect of emotions resulting from either winning or losing a point. “Release” aims at reducing demands on information processing (or simplifying), especially in relation to the need to manage one’s emotional responses to the point-to-point dynamics on the court. From a cognitive psychology perspective, emotion management or control (either positive or negative) can become a secondary task and can lead to a decrease in performance of the primary task (attending to the task at hand [i.e., specifics of the match and movement execution]; e.g., Coombes, Janelle, & Duley, 2005).

“Replay” is the next phase, during which the player either reinforces the right shot or corrects an error through replaying the shot in their mind. “Replay” adds to ongoing motor learning of specific motor responses through on-the-spot mental rehearsal. Both general motor program and specific control parameters can be enhanced through refinements applied into the existing schemas (Schmidt, 1975).

“Recharge” is a micro-break aimed at restoration (or relaxation). Here the player has another opportunity to adjust their intensity (activation) state to a desired level for a particular moment in the match, for a specific opponent, or both. “Recharge” offers an opportunity to manage psycho-physio-neuro-muscular reactions when a player introduces a restorative break and adjusts intensity (arousal) level so they

match his or her desired zone of optimal functioning (Hanin, 1980). Abdominal breathing, other visible behaviors (e.g., adjusting the strings on the racket) can be used and can be monitored by the consultant or the coach. Additionally, a much-needed psychophysiological foundation for optimal attentional focus is established during this phase (activation adjustment) and can be viewed as a “restorative mental bridge” to the phase that follows.

Finally, “Refocus” helps the player move from mental management (i.e., release and recharge) and learning (i.e., replay) to tactical planning and strategizing, and is concluded with a given execution decision to which they commit. Verbal cues associated with the planned task execution (e.g., instructional [technical, tactical], motivational, or both) can be used. They can be further paired with visible behaviors (e.g., quiet/fixed eyes/gaze [see below]) indicating that refocus has been attempted (and again, can be used in mental game monitoring by the consultant or the coach). The cycle then renews when “Respond” (pre-serve or pre-return mental adjustment to trust/automatic control) is again initiated. “Refocus” borrows from a number of sport and performance psychology cognitive-behavioral techniques (e.g., imagery, self-talk) and attention theories (e.g., Nideffer, 1976; shifting between the quadrants of attention). Additionally, motor control mechanisms involved in imagining the upcoming serve activate appropriate motor programs (response selection) and prepare the neuromuscular system for action (response programming). If a quiet-eye period is added, additional benefits (as seen in golf putting) can be experienced such as reduced anxiety (Vine & Wilson, 2010).

Importantly, the individual interpretations of these words are negotiated between client and practitioner, and if necessary, can be replaced with alternative words that make most sense to the player. Depending on individual needs, preferences, and capacity to process information, the 5Rs can be modified to become “2Rs” or “3Rs.” Practice with this cycle on the court allows one to acquire, master, and automatize this between-executions routine to maximize the brief time allocated between the points (about 20 sec).

Clearly, the scientific foundation of applied sport psychology is interdisciplinary in nature and requires from a consultant a plethora of educational and applied experiences. The ability to first translate the complex theories, principles, mechanisms, and concepts into one’s applied work and then secondly into accessible processes and language for the client is essential to successful sport psychology service delivery.

Conclusions

As noted by Aoyagi and Poczwadowski (2011), a model of optimal performance is needed to guide issue conceptualization, intervention planning and implementation, and outcome evaluation in performance psychology. Further, Aoyagi and Poczwadowski (2011) stated that a theoretical foundation of performance excellence appropriately supports the ethical and competent practice of facilitating the enhancement of individual, group, and organizational performance. This assertion represents the underlying thread throughout the present article — that grounding

one's consulting work in science-to-practice insights (theory) and practice-based recommendations (art) enhances the delivery of performance psychology services to clients.

There are limitations, both individually and collectively, of our models of performance excellence. Most notably, we have not empirically examined each model. While all components of the models are grounded in theory, the proposed structure and implementation of each model awaits scientific scrutiny and data collection beyond our experiential reflections and informal evaluations. Collectively, models of performance excellence necessarily sacrifice internal validity for external validity. In other words, the goal is to pragmatically and parsimoniously organize the highest leverage concepts rather than attempt to include all factors that might influence or explain performance excellence. For practitioners, the primary implications are the necessity of a theory-grounded model of practice and the creative and adaptive ways in which theory can be utilized to build a model of performance excellence. Our hope is that through articles such as this, scientists and practitioners will work together to build and empirically evaluate theoretical paradigms of performance excellence such that models of performance excellence are derivatives of theoretical paradigms rather than individual practitioners (Aoyagi & Poczwadowski, 2011).

Although four distinct models for service provision were described herein, distinct commonalities can be found throughout. First, each contributor either delineates an operational definition of, or discusses components of performance excellence, integrating the common concepts of skilled actions attained through developmental processes, consistently executed, under demand conditions. Then, each framework continues by integrating prior research, theory, and application into a guiding model for effective service delivery. These models blend philosophical orientations, motor learning, and development traditions, variations on mindfulness applications and traditional mental skills training interventions into guidelines and frameworks for service delivery. Each model describes the importance of creativity, passion, personal values, and trust (both in self and in the process), and shows that while our empirical foundations may be grounded in similar disciplines and research traditions, the ways in which we each conceptualize, combine, and operationalize our service provision can vary greatly.

References

- Andersen, M. (Ed.). (2005). *Sport psychology in practice*. Champaign, IL: Human Kinetics.
- Aoyagi, M. W. (2011). Running into the fire: The courage to succeed. *Techniques*, 4(3), 30–34.
- Aoyagi, M. W., & Poczwadowski, A. (2011). Models of sport psychology practice and delivery: A review. In S. D. Mellalieu & S. Hanton (Eds.), *Professional practice issues in sport psychology: Critical reviews* (pp. 5–30). London, UK: Routledge.
- Aoyagi, M. W., & Poczwadowski, A. (Eds.). (2012). *Expert approaches to sport psychology: Applied theories of performance excellence*. Morgantown, WV: Fitness Information Technology.
- Benjamin, L. S. (1996a). *Interpersonal diagnosis and treatment of personality disorders* (2nd ed.). New York, NY: Guilford Press.
- Benjamin, L. S. (1996b). A clinician-friendly version of the interpersonal circumplex: Structural Analysis of Social Behavior (SASB). *Journal of Personality Assessment*, 66, 248–266.

- Benjamin, L. S. (2003). *Interpersonal reconstructive therapy: Promoting change in nonresponders*. New York, NY: Guilford Press.
- Benjamin, L. S., & Critchfield, K. L. (2010). An interpersonal perspective on therapy alliances and techniques. In J. C. Muran & J. Barber (Eds.), *The therapeutic alliance: An evidence-based approach to practice & training* (pp. 123–149). New York, NY: J. Wiley & Sons.
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11*, 230–241.
- Bowlby, J. (1969). *Attachment and loss, Volume I: Attachment*. New York, NY: Basic Books.
- Brown, C. H., Gould, D., & Foster, S. (2005). A framework for developing contextual intelligence (CI). *The Sport Psychologist, 19*, 51–62.
- Brown, D., Pryzwansky, W. B., & Schulte, A. C. (2011). *Psychological consultation and collaboration. Introduction to theory and practice* (7th ed.). Boston, MA: Pearson Education.
- Button, C., MacMahon, C., & Masters, R. (2011). ‘Keeping it together’: Motor control under pressure. In D. Collins, A. Button, & H. Richards (Eds.), *Performance psychology: A practitioner’s guide* (pp. 177–190). New York, NY: Churchill Livingstone Elsevier.
- Cohen, A. (2012). The P.A.C.E. performance program: Integrating sport psychology into training programs. *Olympic Coach Magazine, 23*(3), 5–9.
- Cohen, A. (2016, September). *Performance readiness planning*. Workshop conducted at the Association for Applied Sport Psychology 31st Annual Convention, Phoenix, AZ.
- Cohen, A., Tenenbaum, G., & English, W. (2005). Emotions and golf performance: An IZOF-based applied sport psychology case study. *Behavior Modification, 30*, 259–280.
- Coombes, S. A., Janelle, C. M., & Duley, A. R. (2005). Emotion and motor control: Movement attributes following affective picture processing. *Journal of Motor Behavior, 37*(6), 425–436.
- Cox, R. H. (2012). *Sport psychology concepts and applications* (7th ed.). New York, NY: McGraw-Hill.
- Csikszentmihalyi, M. (1990). *Flow; The psychology of optimal experience*. New York, NY: Harper Collins.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227–268.
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality and development*. Philadelphia, PA: Psychology Press.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.
- Dweck, C. S. (2012). *Mindset: How you can fulfill your potential*. London, UK: Constable & Robinson Limited.
- Elliot, A. J., & Dweck, C. S. (Eds.). (2005). *Handbook of competence and motivation*. New York, NY: Guilford.
- Ericsson, K. A. (Ed.). (1996). *The road to excellence: The acquisition of expert performance in the arts and sciences, sports, and games*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Giuliano, R. J., & Wicha, N. Y. Y. (2010). Why the white bear is still there: Electrophysiological evidence for ironic semantic activation during thought suppression. *Brain Research, 1316*, 62–74.
- Greenspan, M. J., & Feltz, D. L. (1989). Psychological interventions with athletes in competitive situations: A review. *The Sport Psychologist, 3*, 219–236.
- Haberl, P. (2012). Peter Haberl. In M. Aoyagi & A. Poczwardowski (Eds.), *Expert approaches to sport psychology: Applies theories of performance excellence* (pp. 51–70). Morgantown, WV: Fitness Information Technology.
- Hanin, Y. L. (1980). A study of anxiety on sports. In W. F. Straub (Ed.), *Sport psychology: An analysis of athlete behavior* (pp. 236–249). Ithaca, NY: Movement.
- Hanin, Y. L. (2000). Individual zones of optimal functioning (IZOF) model: Emotion performance relationships in sport. In Y. Hanin (Ed.), *Emotions in sport*. Champaign, IL: Human Kinetics.

- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York, NY: The Guilford Press.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). New York, NY: The Guilford Press.
- Heath, C., & Heath, D. (2007). *Made to stick: Why some ideas survive and others die*. New York, NY: Random House.
- Jackson, S., & Csikszentmihalyi, M. (1999). *Flow in sports: The keys to optimal experiences and performances*. Champaign, IL: Human Kinetics.
- Janelle, C. M. (2008). Anxiety, arousal, and visual attention: A mechanistic account of performance variability. *Journal of Sports Sciences*, 20(2), 237–251.
- Janelle, C. M., Coombes, S. A., & Gamble, K. M. (2010). The motion of emotion: Affective influences on movement planning and execution. In T. Marek, W. Karwowski, & V. Rice (Eds.), *Advances in understanding human performance: Neuroergonomics, Human factors design, and Special populations*. New York, NY: Taylor and Francis.
- Jha, A. P., Krompinger, J., & Baime, M. J. (2007). Mindfulness training modifies subsystems of attention. *Cognitive, Affective, & Behavioral Neuroscience*, 7, 109–119.
- Jha, A. P., Morrison, A. B., Dainer-Best, J., Parker, S., Rostrup, N., & Stanley, E. A. (2015). Minds “At Attention”: Mindfulness training curbs attentional lapses in military cohorts. *PLoS ONE*, 10(2), e0116889. <https://doi.org/10.1371/journal.pone.0116889>
- Kabat-Zinn, J. (1994). *Wherever you go there you are: Mindfulness meditation in everyday life*. New York, NY: Hyperion.
- Mageau, G. A., & Vallerand, R. J. (2003). The coach-athlete relationship: a motivational model. *Journal of Sports Science*, 21, 883–904.
- Masters, R. S. W. (1992). Knowledge, knerves, and know-how: The role of explicit versus implicit knowledge in the breakdown of a complex motor skill under pressure. *British Journal of Psychology*, 83, 343–358.
- Masters, R. S. W., Poolton, J. M., & Maxwell, J. P. (2008). Stable implicit motor processes despite aerobic locomotor fatigue. *Consciousness and Cognition*, 17, 335–338.
- McGuire, R. (2012). *From the whistle to the snap: Winning the mental game of football!*. Ames, IA: Championship Productions.
- Mink, J. W., & Thach, W. T. (1991). Basal ganglia motor control. I. Nonexclusive relation of pallidal discharge to five movement modes. *Journal of Neurophysiology*, 65, 273–300.
- Moore, W. E., & Stevenson, J. R. (1991). Understanding trust in the performance of complex automatic sport skills. *The Sport Psychologist*, 5, 281–289.
- Moore, W. E., & Stevenson, J. R. (1994). Training for trust in sport skills. *The Sport Psychologist*, 8, 1–12.
- Moran, A. (2004). Staying focused in sport: Concentration in sport performers. In A. Moran (Ed.), *Sport and exercise psychology: A critical introduction*. New York, NY: Routledge.
- Moran, A. (2011). Concentration/attention. In S. Hanrahan & M. Anderson (Eds.), *Routledge handbook of applied sport psychology*. New York, NY: Routledge.
- Nesti, M., Littlewood, M., O'Halloran, L., Eubank, M., & Richardson, D. (2012). Critical moments in elite premiership football: Who do you think you are? *Physical Culture and Sport. Studies and Research*, 56, 23–32. doi:10.2478/v10141-012-0027-y
- Nideffer, R. M. (1976). Test of attentional and interpersonal style. *Journal of Personality and Social Psychology*, 34, 394–404.
- Nolting, J. (2011). Understanding the dichotomy of performance and results. *USSA Sport Education*. Retrieved from http://alpine.uskiteam.com/sites/default/files/documents/athletics/education/2011-12/documents/PERFORMANCE_ARTICLE_2b.pdf
- Novick, M. R. (1966). The axioms and principal results of classical test theory. *Journal of Mathematical Psychology*, 3, 1–18.
- Oettingen, G. (2014). *Rethinking positive thinking: Inside the new science of motivation*. New York, NY: Penguin Random House.

- Poczwadowski, A., & Sherman, C. P. (2011). Revisions to the Sport Psychology Service Delivery (SPSD) heuristic: Explorations with experienced consultants. *The Sport Psychologist*, 25, 511–531.
- Poczwadowski, A., Sherman, C., & Henschen, K. P. (1998). A sport psychology service delivery heuristic: Building on theory and practice. *The Sport Psychologist*, 12, 191–207.
- Poczwadowski, A., Sherman, C. P., & Ravizza, K. (2004). Professional philosophy in the sport psychology service delivery: Building on theory and practice. *The Sport Psychologist*, 18, 445–463.
- Poolton, J. M., Masters, R. S. W., & Maxwell, J. P. (2007). Passing thoughts on the evolutionary stability of implicit motor behaviour: Performance retention under physiological fatigue. *Consciousness and Cognition*, 16, 456–468.
- Ravizza, K. H. (2002). A philosophical construct: A framework for performance enhancement. *International Journal of Sport Psychology*, 33, 4–18.
- Ravizza, K., & Hanson, T. (1995). *Heads-up baseball. Playing the game one pitch at a time*. Indianapolis, IN: Masters Press.
- Roberts, G., & Kristiansen, E. (2010). Motivation and goal setting. In S. Hanrahan & M. Andersen (Eds.), *Routledge handbook of applied sport psychology*. New York, NY: Routledge.
- Ronkainen, N. J., & Nesti, M. S. (2017). An existential approach to sport psychology: Theory and applied practice. *International Journal of Sport and Exercise Psychology*, 15, 12–24. doi:10.1080/1612197X.2015.1055288
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68–78.
- Schmidt, R. A. (1975). A schema theory of discrete motor skill learning. *Psychological Review*, 82, 225–260.
- Schmidt, R. A., & Wrisberg, C. A. (2008). *Motor learning and performance* (4th ed.). Champaign, IL: Human Kinetics.
- Vallerand, R. J., & Blanchard, C. M. (2000). The study of emotion in sport and exercise: Historical, definitional, and conceptual perspectives. In Y. Hanin (Ed.), *Emotions in sport*. Champaign, IL: Human Kinetics.
- Vealey, R. S. (1988). Future directions in psychological skills training. *The Sport Psychologist*, 2, 318–336.
- Verburgh, L., Scherder, E. J. A., van Lange, P. A. M., & Ooserlaan, J. (2016). The key to success in elite athletes? Explicit and implicit motor learning in youth elite and non-elite soccer players. *Journal of Sport Sciences*, 34, 1782–1790.
- Vernacchia, R. (2003). *Inner strength. The mental dynamics of athletic performance*. Palo Alto, CA: Warde Publishers.
- Vine, S., & Wilson, M. R. (2010). Quiet eye training: Effects on learning and performance under pressure. *Journal of Applied Sport Psychology*, 22, 361–376.
- Wegner, D. M. (1994). Ironic processes of mental control. *Psychological Review*, 101, 34–52.
- Weinberg, R. (2011). Activation/arousal control. In S. Hanrahan & M. Andersen (Eds.), *Routledge handbook of applied sport psychology*. New York, NY: Routledge.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality*, 31, 21–33.
- Wulf, G., McNevin, N., & Shea, C. H. (2001). The automaticity of complex motor skill learning as a function of attentional focus. *Quarterly Journal of Experimental Psychology Section A: Human Experimental Psychology*, 54, 1143–1154.
- Yarrow, K., Brown, P., & Krakauer, J. W. (2009). Inside the brain of an elite athlete: The neural processes that support high achievement in sports. *National Review of Neuroscience*, 10, 585–596 (2009). doi:10.1038/nrn2672