SECRETS OF PSYCHOLOGY FOR ATHLETES

Are you fed up with training? Are you out of breath? Find your inner peace in the depths of your athletic mind through the vast ocean that is sport psychology and we show you the path into the depth of sport psychology.

Farshad Najafipour was born in 1966 Iran-Tehran. He received his MD Degree in 1991 and continued his Post Doc in Psychology. He is known to be as a skillful sport psychologist for sport champions and a family consultant in the field of sexology. He has already published many papers in the field of psychology.
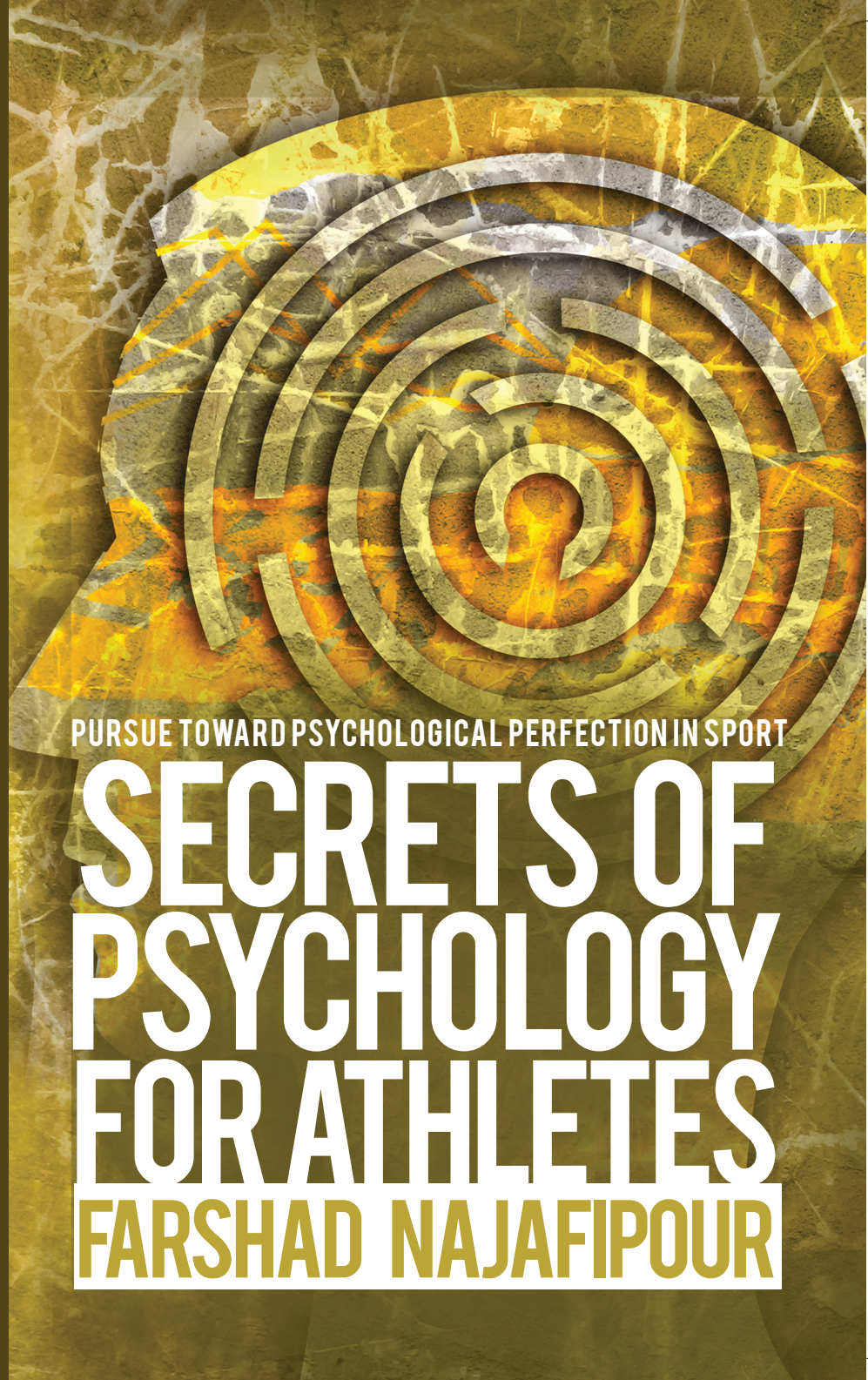
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FARSHAD NAJAFIPOUR

I would like to dedicate this book to
my dear family; my beloved wife Marzieh,
my dear sons Farzad and Farbod

Contents

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Special thanks to my assistant and colleague Mr. Milad Darejeh who helped me a lot to complete this book

State of Art in Sport Psychology

In America, sport psychology's roots date back to the late 19th and early 20th centuries when several psychologists started conducting sports-related studies. In 1898, psychologist Norman Triplett found that cyclists made better time when they were competing against others in races versus when they cycled alone. Edward W. Scripture, a psychologist at Yale University, studied the reaction time of runners. In the 1920s psychologist Walter Miles, along with grad student B.C. Graves and college football coach Glenn "Pop" Warner focused their attention on football. They wanted to find out the quickest way for offensive linemen to move in harmony after the canter hiked the ball. Miles created his equipment for the experiment to ascertain the players' reaction times. Griffith began offering the first course in sports psychology in 1923, and later published the first book on the subject titled *The Psychology of Coaching* (1926). Unfortunately, Griffith's lab was closed in 1932 due to lack of funds. After the lab was shut down, there was very little research on sports psychology until the subject experienced a revival of interest during the 1960s. Ferruccio Antonelli established the International Society of Sport Psychology (ISSP) in 1965 and by the 1970s sports psychology had been introduced to university course offerings throughout North America. The first academic journal, the *International Journal of Sport Psychology*, was introduced in 1970, which was then followed

by the establishment of the *Journal of Sport Psychology* in 1979. By the 1980s, sports psychology became the subject of a more rigorous scientific focus as researchers began to explore how psychology could be used to improve athletic performance, as well as how exercise could be utilized to improve mental well-being and lower stress levels.

Major Topics Within Sports Psychology

There are a number of different topics that are of special interest to sports psychologists. Some professionals focus on a specific area, while others study a wide range of techniques.

- *Imagery:* Involves visualizing performing a task, such as participating in an athletic event or successfully performing a particular skill.

- *Motivation:* A major subject within sports psychology, the study of motivation looks at both extrinsic and intrinsic motivators. Extrinsic motivators are external rewards, such as trophies, money, medals or social recognition. Intrinsic motivators arise from within, such as a personal desire to win or the sense of pride that comes from performing a skill.

- *Attentional Focus:* Involves the ability to tune out distractions, such as a crowd of screaming fans, and focus attention on the task at hand

In the last 40 years, the demand for applied sport psychology has increased as coaches, athletes, and exercise participants have sought help with performance and other issues, and as practitioners have marketed their services. Concurrent with the increased demand, researchers have

conducted investigations to examine whether applied sport psychology can help athletes and exercisers with their issues. The lion's share of researchers' attention has been towards evaluating practitioners' typical interventions (e.g., goal setting, self-talk). A much smaller number of studies have focused on effective practitioners' characteristics. There are even fewer investigations examining optimal ways to train practitioners. Some professionals believe training to become an applied sport psychologist involves more than learning the typical interventions used in the profession, because psychological service delivery is intimately tethered to practitioners and their client relationships, a feature recognized in other applied psychology disciplines. Findings from research on applied sport psychologist training and development have strong parallels with results from mainstream psychology investigations, providing evidence that parent literature can help guide educators' and supervisors' attempts to mentor trainees. One purpose of this chapter is to explain typical trends in applied sport psychologist development and training. Another purpose is to suggest ways that educators, supervisors, trainees, and practitioners may benefit from practitioner maturation knowledge. Given the parallels between the sport and mainstream psychologist development literature, this knowledge may also help practitioners from other disciplines wishing to reconfigure their skills to work with exercise participants and athletes.

Trends in Applied Sport Psychologist Development

When trainees first begin working with clients, they typically adopt problem-solving perspectives, in which they attempt

to provide solutions to athletes' issues. Associated with a problem-solving approach, trainees also behave in rigid ways and try to adapt clients' issues to fit the interventions they (trainees) have at their disposal. For example, trainees may apply goal setting in ways they have been taught by respected mentors without much consideration for clients' specific needs. Trainees' service delivery practices often result from their desire to justify their involvement with clients. With experience, practitioners may start collaborating more with clients, acting as facilitators rather than problem solvers, and adapt interventions to suit athletes' specific needs. For example, rather than tell an athlete she should write her goals on paper, a practitioner may help the individual create a pictorial montage because the client believes that approach will be more helpful for her motivation to train regularly. Trainees may have difficulty adapting interventions to clients' needs because they can be distracted during service delivery by their own cognitive activity. In addition to listening to athletes' stories, beginning practitioners are normally trying to coach themselves through sessions, and attempting to recall advice from supervisors, educators, and their readings. As practitioners develop a sense of competence, the level of internal Simpson family domestic chaos reduces and trainees report that they are better able to listen to clients. Although excited about helping people, neophyte practitioners are acutely aware they have limited knowledge and skills. They may also be fearful that they will be stripped naked professionally in front of clients and supervisors and be exposed as frauds. With client experience, anxiety intensity is likely to be reduced as practitioners come to realize they can help athletes. Also, they might reinterpret their anxieties as a sign that they care about helping clients and want to improve

their service delivery. Mature practitioners, however, are not immune from service delivery anxiety, and may experience self-doubts when working in novel situations and with client groups with whom they have not previously interacted.

The change from directive advice-giving and problem-solving approaches to more collaborative and facilitative perspectives is usually associated with an increased recognition of the role of relationships in service delivery, a decreased sense of self as a change agent, and greater appreciation for the ways individuals' needs and personalities influence service delivery. Trainees often develop their interpersonal skills and attempt to realign the balance of service delivery power to allow clients more control over relationships. Trainees may also reflect on ways they can draw on their issues and needs to inform their client-interactions or ensure their "stuff" does not hinder service delivery. For example, a neophyte consultant may draw on his experiences of locker room homophobia to help understand gay male athletes' difficulties functioning in threatening and inimical environments. The recognition of the role of the self in service delivery reflects the individuation process in which practitioners develop service delivery styles that mirror their personalities and the theoretical orientations resonating with their worldviews (Rønnestad & Skovholt, 2003). For example, individuals who like to adopt a philosophical and rational approach to problems and believe that the cognitive model readily explains much human functioning may base their service delivery on cognitive therapy principles. Individuation often involves experimentation, and over time practitioners may try on for size the mantles of various schools of thought as they search for the one(s) that fits comfortably. Given that initially

trainees have limited internal cognitive and behavioral maps to guide service delivery, it is understandable they will seek information from external sources. The principle of specificity from exercise physiology might help make sense of the types of information trainees' value. The specificity principle suggests that athletes benefit more from modes of training closely resembling their sports than those methods placing different demands on their bodies. Trainee applied sport psychologists value most sources of information providing models or knowledge about how to work with clients. One such source includes taking part in or observing actual or simulated (e.g., role plays) service delivery. A second source involves discussing service delivery with a supervisor or other colleagues. Although trainees (and practitioners) do find theory and research useful sources of knowledge, the professional literature dealing with the service delivery processes is typically deemed more helpful than the latest research on interventions. Examples include books and articles dealing with how to interact with clients or use interventions, and those that include examples of service delivery in action. With increasing amounts of client interaction, neophyte practitioners' reliance on external knowledge sources decreases, and they are able to draw on their accumulated experiences.

Optimizing Professional Growth

Applied sport psychologists begin their careers sticking closely to recipes of action dictated to them by their mentors. As individuals accumulate service delivery experience, they are able to explore different ways of operating and develop consulting styles reflecting their personalities and theoretical orientations. One challenge for educators, supervisors,

and practitioners is to find ways to facilitate professional development, such as helping trainees manage and learn from their anxieties. Some professional development issues, however, probably receive insufficient attention from professionals in the discipline. For example, a substantial proportion of qualified sport psychology practitioners do not seem to have regular or frequent supervision. Also, the supervised work experience hours students undertake in many places may be considered minimal compared with those from other applied psychology disciplines.

Supervised Experience

Given that research indicates client interactions and supervision are the most potent influences on professional development, it is understandable many educators argue that formal supervised experience is one pillar of effective training programs.

Through supervised experience trainees have opportunities to explore their craft and develop their skills, in a safe (one would hope) environment under the guidance of a caring supervisor. Through supervised experience, beginning practitioners can learn to cope with the messiness of real-world service delivery and deal with the ethical, interpersonal, logistical, and other issues that crop up when operating in helping professions. Supervision can also help practitioners from other fields of psychology receive assistance from an experienced applied sport psychologist when they expand their work to athletes. Just as some writers believe the working alliance is one (if not the central) cornerstone of psychotherapy and applied sport psychology, some researchers have suggested that

the supervisory working alliance is a (or *the*) foundation of effective supervision.

For Bordin, supervisory working alliances refer to relationships in which participants collaborate to achieve the desired objectives of supervision and consist of: (a) mutually agreed goals, (b) shared understandings of the tasks each party will undertake, and (c) interpersonal bonds between partners. Bordin (1983) included eight broad goals in his model that may help supervisors and supervisees identify specific aims relevant to their particular needs and situations. Bordin's goals included helping supervisees to: (a) master specific skills, (b) enlarge their understanding of clients' concerns, (c) increase their awareness of service delivery process issues, (d) expand their self-knowledge about how they influence client interactions and outcomes, (e) deal with personal obstacles hindering development, and (f) deepen their appreciation of theory. Two additional goals Bordin mentioned were using supervision as a stimulus for research, and the maintenance of service delivery standards. The achievement of supervision goals, according to Bordin, is influenced greatly by the negotiated tasks and the interpersonal bonds among the parties. Examples of tasks he proposed as being typically associated with supervisees includes preparing and presenting service delivery reports for discussion. Examples of tasks within the supervisor's realm include providing feedback, suggesting alternative conceptualizations, and directing supervisees' attention to relevant phenomena such as their feelings during service delivery. One characteristic of effective supervisors is their ability to tailor tasks to suit supervisees' developmental needs and to negotiate specific goals. The strength of the interpersonal bond is in the degree to which the parties

involved care for, like, respect, and trust each other. One particular issue influencing interpersonal bonds specifically, and supervisory alliances generally, is the evaluative component of supervision. Supervisors are gatekeepers tasked with the responsibility of protecting the public and profession. The development of a strong interpersonal bond will help buttress potentially sensitive feedback. Supervision relationships provide a structure within which parties can deal with issues and problems that arise in service delivery. Supervision can quickly become a messy interpersonal minefield because trainees and supervisors bring their strengths, frailties, desires, and needs, of which they may or may not be aware, to the relationship. Reading suitable literature may be a useful way to help people prepare for supervision, and be able to recognize and deal with problems and issues.

Supervision contracts are another vehicle by which the potential messiness of supervision can be addressed. The degree of formality and structure of contracts has probably varied across supervisors in applied sport psychology. The trend, however, toward accountability in higher education and the workplace may lead to contractual processes becoming more explicit and documented. In the absence of accountability and legal pressures, a number of additional benefits may be accrued when individuals consider their rights and obligations in supervision. Issues that may hinder supervision can be acknowledged before they arise and possible solutions discussed. A contract may provide a basis for decision making and a way to resolve conflicts if either party feels aggrieved.

Generally there are four areas to consider when establishing supervision contracts: (a) students' developmental needs; (b) supervisors' competencies; (c) goals, methods, and focus; and (d) the opportunities provided by the work setting. In many situations, such as when supervisees work in the same organizations as supervisors, addressing each of the areas may be relatively straightforward. There are indications, however, that some applied sport psychology supervisors may not have much service delivery experience, may not have training in how to foster students' development, and may not work in the same organization as supervisees. In less than ideal situations, contracts may be needed to clarify people's rights and obligations because opportunities for conflict and unhappiness may be greater than when supervisors are active practitioners, have training and experience in mentoring others, and operate in the same workplaces as supervisees.

Consideration of students' developmental needs will inform goal setting. There are various theories through which to view and address supervisees' developmental needs, and supervisors may change their approaches as supervision progresses.

Van Raalte suggested beginning trainees may find behavioral models helpful because the focus is on skill development and supervisors give direct advice. Phenomenological and psychodynamic approaches may be suitable for advanced students. Based on these models, supervisors create environments conducive to supervisee growth and encourage trainees to examine how their needs and histories influence service delivery relationships and outcomes. A brief discussion about the models supervisors adopt may help trainees understand why their mentors

act and react in particular ways during supervision. More broadly, student practitioners will likely benefit from experiencing multiple supervisors (although not for the same client at the same time). Receiving supervision from a range of practitioners will expose trainees to different perspectives and modes of service delivery. Supervision from a variety of people may help trainees develop flexibility in their client interactions.

Given that some sport psychology supervisors may have limited service delivery experience, have little supervision training and work away from the locations where trainees are gaining experience, reflecting on their competencies may help them identify ways to ensure goals are achieved. In some cases, it may be prudent for individuals to turn down requests for supervision. In other instances, after beginning supervision relationships, supervisors may realize they are not able to help trainees with issues that have arisen in service delivery. The ethical response is to refer trainees to other supervisors. Educators and practitioners who seek supervision training may find that the quality of their supervisory working alliances improves, and their trainees are better prepared for their careers. Meta supervision is one way that individuals may develop their abilities to mentor others, and refers to when individuals receive supervision for their supervision of others. Meta supervision was a feature of Barney, supervision training model in which beginning students were supervised by advanced trainees, who in turn were overseen by faculty. It is doubtful, however, that Meta supervision procedures are included in many training programs.

Specificity refers to the balance between making goals general enough to be meaningful and specific enough to

be measurable. Permanence refers to striking a balance between rigid adherences to outdated targets and changing goals too frequently. There is a great deal of theory and literature on goal setting to help guide supervisors in setting supervision goals. As with many interventions, with experience supervisors will learn how to tailor and negotiate supervision goals to meet trainees' needs. Another area, focus, refers to the objects, people, and events of primary attention in supervision. The main areas of focus in supervision include clients, trainees, and therapeutic relationships. The areas of focus in supervision may vary according to factors such as supervisors' theoretical orientations and trainees' developmental needs. Detailing the areas of focus may help avoid misunderstanding and frustration. For example, a misunderstanding may arise if supervisors focus on the supervisory working alliance, as a parallel process for the therapeutic alliance, when trainees expect the primary attention to be given to their mastery of specific interventions. One of Bordin's supervision goals was helping trainees overcome personal obstacles to learning, and this goal may blur the boundaries between supervision and personal counseling. Supervision is the suitable place where trainees can examine how personal issues influence service delivery processes and outcomes, such as how their past experiences with drugs may cause them to react if athletes admit to steroid use. The roots and treatment of trainees' personal issues, however, are best addressed in personal therapy and not supervision. More broadly, authors have advocated the value of applied sport psychologists undertaking personal counseling.

Undertaking Counseling for Personal Issues

Research provides evidence that practitioners derive personal and service delivery benefits from receiving counseling. One benefit, for example, is an increase in self awareness, in addition to resolving personal issues. Increased awareness allows practitioners to be cognizant of their reactions and behaviors, and explore how they might influence service delivery. The opportunity to sit in the client's chair helps practitioners gain insights into how athletes might experience service delivery. Undertaking personal psychotherapy may also help trainees develop confidence and manage their anxieties because observing a practitioner in action may help them to develop a cognitive map of service delivery.

Reflective Practice

Reflective practice is one central pillar to optimal professional growth, because the cognitive processing of experience may stimulate changes in the ways practitioners understand their craft and behave. Although self-reflection can help practitioners develop new service delivery insights and practices, they can find it uncomfortable because they may need to admit to limitations and mistakes. Also, practitioners' blind spots and finite worldviews may limit the benefits gained from reflective practice.

Self-reflection can be improved with guidance and support. Individuals can obtain guidance by following a reflective framework. Johns' model, for example, consists of a series of questions that help practitioners describe, reflect on, and learn from their experiences. Further guidance

can be sought from the writings of other sport psychology professionals who have discussed reflective practice. Reflective practice need not be a solitary experience, and additional guidance and support can be obtained by including others in the process. For example, practitioners can establish ongoing relationships with peers in which they discuss service delivery experiences together. Shared reflection underpins effective supervision. Supervisors may also draw on the reflective practice literature to consider their own supervisory practices and help trainees engage in self-investigation. Also, applied sport psychologists can learn a great deal about the human condition and service delivery from reflecting on a range of experiences, not only athlete interactions. For example, practitioners who reflect on traumatic events they have experienced (e.g., divorce) may find that their levels of tolerance, empathy, and acceptance for difficult clients increase.

Developing Strong Professional Networks

Sport and mainstream psychologists report that interactions with colleagues contribute to professional development. Learning how colleagues operate and exposing one's practice to peer review may lead to improved service delivery or reassure individuals they are already acting ethically, safely, and effectively. Professional networks might include clinical and counseling psychologists, psychiatrists, social workers, pastoral care providers, sport and exercise scientists, coaches, marriage and family therapists, horse whisperers, career guidance and substance abuse counselors, sport administrators, sports medicine specialists, and physical therapists. Interacting with a wide range of professionals may provide practitioners with alternative perspectives

on service delivery and greater insights into the various issues with which athletes grapple. Having a wide range of contacts also helps ensure practitioners will be able to find suitable professionals for referral and supervision purposes. Psychologists and counselors have also reported that supervising others leads to professional growth because it stimulates self-reflection on one's knowledge and skills.

Through helping trainees, for example, experienced practitioners might uncover blind spots about how they influence athlete interactions. Networking might be achieved by attending and presenting at professional organizations' conferences and meetings. Establishing informal but regular contact with groups of peers, or individuals, are other ways to network. Collegial interaction is not limited to face-to-face meetings, and practitioners can make use of various other communication modes including email, discussion boards, and blogs.

The conditioning of many athletes is based on systematic training plans and regular feedback and instruction from coaches and other experts to help individuals achieve their targeted goals. Perhaps sport training provides a metaphor for effective applied sport psychologist training: competence results from the use of specific goals, expert feedback, and guided practice. The content presented in the current chapter may help trainees and practitioners strive toward specific goals and seek the feedback and guided practice that will allow them to develop their service delivery skills to better meet their clients' needs.

See TIPS for a summary of practical suggestions.

Practical suggestions for sport psychologists' training and development

- Develop patience regarding professional development, realizing it takes many years to master the service delivery process.
- Accept that anxiety is a typical experience when first engaging in service delivery and when working in novel situations.
- Avoid being negatively self-critical, but accept your level of self-development.
- Remember nearly everybody experiences similar emotions and developmental themes.
- Engage in self-reflection and find ways to make it an interpersonal experience.
- Draw on reflective practice models to facilitate the process.
- Keep good case notes to aid in self-reflection and supervision.
- Receive regular supervision from a range of individuals (but not for the same client at the same time).
- Establish a clear and explicit contract at the start of supervision.
- Develop conflict resolution and management skills to help deal with difficult situations in service delivery and supervision.
- Engage in supervision training, and when suitable be open to supervising others.
- Read professional literature to stay up-to-date about what works in service delivery.
- Engage in self-analysis through personal therapy.
- Develop relationships with professionals from a range of disciplines.
- Join and become involved in professional organizations.

The Performance Environment in Sport

The historical debate on the relative influences of genes (i.e. nature) and environment (i.e. nurture) on human behavior has been characterized by extreme positions leading to reductionist and polemic conclusions. Our analysis of research on sport and exercise behaviors shows that currently there is little support for either biologically or environmentally deterministic perspectives on elite athletic performance. In sports medicine, recent molecular biological advances in genomic studies have been over-interpreted, leading to a questionable 'single-gene-as-magic-bullet' philosophy adopted by some practitioners. Similarly, although extensive involvement in training and practice is needed at elite levels, it has become apparent that the acquisition of expertise is not merely about amassing a requisite number of practice hours. Although an interactions perspective has been mooted over the years, a powerful explanatory framework has been lacking. In this article, we propose how the complementary nature of degenerate neurobiological systems might provide the theoretical basis for explaining the interactive influence of genetic and environmental constraints on elite athletic performance. We argue that, due to inherent human degeneracy, there are many different trajectories to achieving elite athletic performance. While the greatest training responses may be theoretically associated with the most favorable genotypes being exposed

to highly specialized training environments, this is a rare and complex outcome. The concept of degeneracy provides us with a basis for understanding why each of the major interacting constraints might act in a compensatory manner on the acquisition of elite athletic performance.

After a fantastic run back in May, the England U17s just lost out to Spain in the final of the European Championships. Following a slow start, the England U-21s played fantastically against the home nation, Holland, before going out 13-12 in an epic penalty shoot-out. With the Women's World Cup Finals just around the corner, now is a good time to discuss the factors that underpin successful performance in international tournaments.

The following article describes the first phase of a 3-year study into the performance environment in football. From a practical perspective, a scientific study of these factors should help inform the preparation of elite teams and help coaches at all levels of the game become more aware of the impact of broader environmental factors on performance.

"We conducted detailed interviews with national coaches, players, and sport scientists after these tournaments: the Victory Shield (U16s), European Championships (U17s), Meridien Tournament (Under 18s), European Championships (U19s) and World Championships (U20s)."

A total of 131 performance impacting factors were identified – 79 positive and 52 negative. The most important of these are shown in Figure 1 and described below.
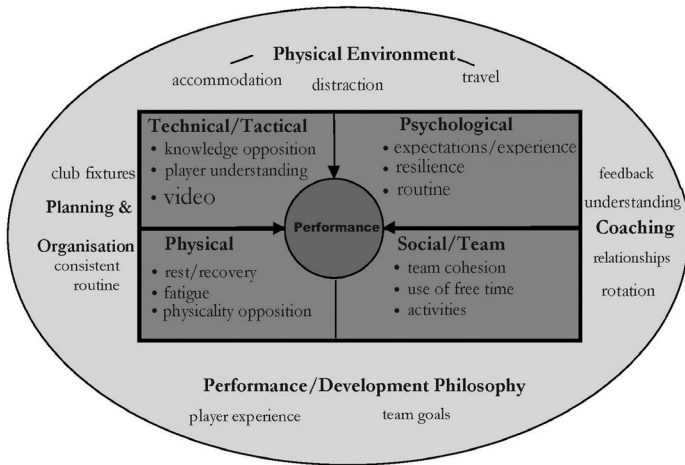
Figure 1. The performance environment in football.
Factors were organised into 8 distinct components.
'The 4 Corners' are shown in the centre rectangle,
with the additional 4 components in the outer ellipse.

Coaching

- **Player Rotation** – The head coach of each team favoured rotation during tournaments, and all perceived it to be in line with performance goals. As the following head coach explained:

> Every player had had a start. And I felt that was important. Because if I was trying to get across the team ethic and squad mentality, if I wasn't doing that, they wouldn't believe me or accept what I was saying.

England generally rotated players more often than other nations, with coaches feeling that rotation enabled players

to cope better with the physical demands and that it helped maintain group cohesion.

- **Understanding** - Within teaching and learning, good player understanding (of roles and responsibilities and team tactics) was frequently seen as positively affecting performance. Different learning methods were employed to help with this, including multimedia, posters, walkthroughs, and laptop exercises simulating different on-pitch scenarios.

- **Feedback** - The importance of feedback and reflection to the performance and ongoing development of players was acknowledged by both players and coaches:

> But what is also important is the understanding of training, the reflection on training, and reflecting on the game personally. We're very good at dealing with diet, nutrition, rest and recovery…not so sure we're that good at getting them to look back on their performances in training or when they play. Some will do it, some will keep a diary, and others are not sure how they should do it.

The need for specific feedback was recognised in the above quote, and lack of feedback emerged as a negative factor for two players.

- **Coach-Player Relationships** were frequently cited as a key part of the environment. Good relationships, one-to-one meetings and staff/player continuity were seen to help team and player performance. Both

coaches and players did, however, report a lack of personal time together, which reduced the strength of these relationships:

> I only wish there was more time for one on ones. I wish I knew the boys, personally, better than I do. I know some of them personally quite well, and can talk to them about issues with the clubs, personal problems etc. Because the squad continually changes it's difficult to get to know all the players that well. The players don't generally come to you, as much as the coach should go to the players.

Tactical Factors

In this area, which overlaps with coaching, the focus was on tactical development and building a unit from the assembled group.

- **Knowledge of Opposition** - Coaching simulated opposition systems and watching videos of the opposition were the most cited positive factors in this area. All the negatives related to the opposition being in some way unexpected, or unfamiliar.
- Player understanding of their roles and of the team shape was seen as central to performance.

Psychological Factors

- **Player Expectations** - The benefit of having a team that knew what to expect at a tournament was clear. Setting the expectations of players and mentally

preparing them in advance for the eventualities that may occur were seen to reduce anxiety, improve focus and make the players easier to organise. As this player explains:

> If I'd gone on the match day and seen the stadium, I'd have been pretty nervous.

In a similar way, **previous experience** meant that players knew what to expect and were therefore better able to cope.

- **Routine** – Maintaining a familiar pre-match routine, most frequently emphasised by players, was seen as important, and when disrupted could cause problems. The use of video and positive encouragement reminders came under the first of these factors:

  > They were good at getting you ready for the match. We were psyched up for it. They showed you clip from training. Showed what you did well, showed what you could improve on. And he said 'let's take that from the training session into your match.' And we did.

- **Anxiety** – Over anxious players was the second most frequently cited factor within psychology and was seen as having a negative effect on performance. The impact of anxiety on performance is very well researched; pre-match and within match anxiety was reported as major sources of stress in a recent study of an international female team. Head coaches were aware that high expectations can also create anxiety:

I think the problem they have is a little anxiety, in that 'we're England, we shouldn't lose.' They paint that picture for themselves. And even the staffs believe that. You know 'I see a lot of good players in this dressing room.' Unknowingly we create a little bit of anxiety there as well. I've heard it in a lot of dressing rooms, at different levels.

- **Resilience** – The response of the team and individuals to adversity was seen as critical to determining performance. Strong team resolve was frequently cited as underpinning a good performance, as this head coach explained:

What is pleasing about the group is that they have great resolve. They don't submit easily. They're not easily beaten as a team. They're gutsy. They stand up for what they've got, and they don't relinquish what they've got easily. They're not used to losing. They had that in Denmark, and they retained that in this tournament.

Physical Factors

- **Physical Regeneration** strategies were frequently cited by both staff and players, with universal agreement regarding the benefits. Ice baths were raised by most players as being particularly effective. During tournaments, especially those in which the team play a match every other day, the focus physically is on recovery. The necessity of maintaining this focus, even to the detriment of having full coaching

sessions, was clearly acknowledged by head coaches and players alike:

- **Physical Opposition** – The physical nature of the opposition posed problems for England's youth teams, with opposition players often cited as being physically superior to the England players, as explained by a sport scientist:

  > But they were physically superior and would beat us in a running game. And the Spanish are early matures. We're not, at 17 and 18, fully equipped to win a major event. But can be put in with a shout by virtue of our organisation, and strategy, player rotation etc. Spain and France can run out 6 games without a problem.

- **Physical Fatigue** – Although only mentioned by one player, fatigue over the tournament was frequently mentioned by staff, and one of the most cited negative factors. As explained by a sport scientist:

  > We do, as a country, pay a big toll physically for our games. And certainly when we got out of the 3rd game, if we'd had to play another game two days later, we'd have probably been missing three players if not four. And that seems to be a much larger toll than other nations takes at these tournaments.

Two themes emerged to explain why England teams fatigued in this way: the younger players in the team relative to the opposition, and the faster, more physical style of play.

Problems with sleeping were also mentioned by two players and two staff as a problem over the five tournaments covered.

Planning and Organisation

- **Consistent Routine** – Following a consistent routine with players at all age groups was central to the work of the coaching staff:

> The team responded to everything in terms of prep and training. They took on board everything. It highlights the benefits of a continuous system where they come in young and get the same messages. There's continuity, stability. So it was very easy to mould them into a good unit even though they hadn't all played together.

The positive impact of adhering to a consistent tournament strategy strongly supports previous research on performance and training routines in peak performance, especially with Olympic teams.

- **Club Priorities** meant that players were sometimes unavailable for selection, it also meant some players were unable to join the squad until just before the tournament started. Despite the potential last minute difficulties, the benefits of **detailed advance preparation**, including a reconnaissance trip to the tournament location, were still evident:

> And because of the heat in that environment we had to make sure we could make use of deep-water recovery sessions and ice baths. And that paid big dividends. To the extent

of getting access to a huge walk in freezer at the hotel for ice jackets that we used in training.

Physical Environment

- **Distractions** in the environment were mentioned by some of the coaching staff:

  I remember going to Brazil, and 4 or 5 of the lads were completely overwhelmed by it. There was a pool, plenty of sun, a lazy kind of atmosphere and way of life, games came thick and fast, every other day, and they never quite came to terms with what was necessary to compete under those circumstances.

- **Accommodation** – The impact of living space and of team meeting rooms was also highlighted. Sharing the same hotel with the opposition teams was seen as a negative factor in one instance as the team were not able to fully relax at any time. Travel was frequently discussed and was also seen as having a negative impact if disrupted.

Development and Performance Philosophy

- **Team Goals** – Overall, coaches felt that players had a tendency to focus on the overall tournament outcome and an attempt was made to shift the emphasis towards developmental goals:

They thought they had a chance to win it. We'd gone through six games without conceding a goal. Even without some key players, they still felt they had a chance to win it. I tried to deemphasise that a little bit. Making them aware there are a lot of aspects to this tournament. That was more of a sub target, to look at the process and experience the process, and enjoy the process. And yet if we do that correctly we could have a decent tournament.

- **Player Experiences** – Experiencing stressful situations was seen as part of the players' development as internationals. The players' reaction to the stress of tournaments afforded the coach an insight into their likely coping skills:

    But also the travelling allowed me to see the boys when they're tired. Seeing how they react in a stressful and tired situation allows me to look at how we might manage if we're going to be abroad for 11 or 12 days.

Social Factors

- **Team Cohesion** was the most frequently cited positive performance factor. The following quotes, both from players, illustrated the perceived impact of cohesion on performance:

    Especially in hard times…when we were 2–0 up and they pulled it back to 2–2, and we still won 3–2. The team spirit came into

> play there and against Nigeria as well. We were good in tough situations.
>
> I think what helped us on the night is that we were together as a group. Normally when you go away you get that group, that group, you know people who've played each other a lot, or used to be at the same club, but everyone was together as a group. Everyone spoke to everyone, no one was ignored. So it was a good thing. 'Cause if you get a team that don't get on, you don't play as a team.

The impact of a pre-tournament get-together echoed the pattern of successful Olympic teams, and building team cohesion was seen as a (if not *the*) critical component of pre-tournament preparation. Cohesion was helped by strong leadership, player communication, retaining a core of players, low maintenance players and having the team travel in the England kit. On the other side, poor cohesion was perceived as negatively influencing performance.

- **Free Time** – The England tournament environment is highly structured, sometimes leaving little free time for players. This issue emerged as one of the most frequently cited negative performance factors, and was recognised by coaches, sport scientists and players:

> Prior to the tournament, because we only have a short time together, the training is crammed in. So there's no time to have downtime, and you get into it, and suddenly the tournament is running away

with you, its prep for the next game, and by the last game, the lads are tearing their hair out. It needs looking at… We need to perhaps look at a slight compromise, that gives them a psychological boost.

- **Social Activities** – The major positive factor under this higher order theme related to organised entertainment activities, including trips to the beach and to the golf course, which were frequently perceived as having a positive impact.

- The results reveal the performance environment to be multifaceted, with performance dependent upon a range of interacting factors. Social, psychological, coaching and physical factors were most frequently discussed, and also contained the major positives and negatives.

- To fully support player development and performance, knowledge of the technical, tactical, and physical components of the performance environment should be supplemented with an appreciation of the psychological, social, and broader organisational and environmental areas. Composure, resilience, cohesion, the pre-match routines, and anxiety are some of the additional factors revealed here as having a major impact on performance.

Chapter 3

The Pressure in Sport

The pressure experienced by sport players especially at a professional level is recognised as influencing playing performance. Heavy playing schedules, competition for team places, the media and fans as well as the pressure to win trophies all play a part in players developing high stress and anxiety levels. Even experienced players can suffer from pre-match stress. Developing ways to control this is important in order to prevent players from "falling" apart.

Stress and Anxiety

The Canadian researcher Selye describes stress as the "psycho-physiological responses of the individual to any influence which disturbs his inner-balance." These psycho-physiological changes do however depend on the individual's tolerance to stress. Stress as mentioned earlier can be due to many environmental factors although illness and nutrition can also play a role. The individual players' reaction to stress can involve aggression and anger or inversely, inhibition, regression and fear. Players are more at risk of injury when stressed due to their attention levels being disorientated. Sports Psychologists can measure stress levels through specially designed questionnaires and by using measurements of heart rates to discover the psycho physiological stress levels. The body prepares for stress through the *fight-flight* reaction, which is the response of the

body preparing for action via increased heart and breathing rate and the secretion of adrenaline. *Anxiety* involves a feeling of fear or a perception of threat and which may be specific to a particular situation. Possible symptoms are nausea, loss of composure, reduced motor coordination and aggression. Potential stressors are the climate - temperature/humidity, circadian body rhythms - maximum effort is harder in the morning, jet-lag, playing environment - stadium, spectators, surface, game officials and finally stress created by opponents or between players and the coach. The intensity of these influences on stress depends on the individual perception or inner experience of the player. When players are alert but relaxed, they can make better, quicker decisions during a match. An over-anxious player will often make incorrect decisions. Athletes can as well be more motivated when they realize that they can control their anxiety and are then free to play at their top level. By getting to know a player well, a coach can sometimes diagnose why he is over-anxious however, it may be difficult to get through to players suffering from anxiety thus much discretion is needed. A coach can look for various signs such as moments of anger or loss of confidence and players who no longer utilise their skills correctly. Players can as well become isolated and hide away from their teammates or become aggressive and blame everyone else for their problems. A good example is the centre forward who has not scored for several games who may blame the lack of decent service.

Relaxation

As a consequence of stress and anxiety, those involved in sport especially at top levels are realising the need for pre-competition relaxation strategies. Helping the mental

state will have a positive effect on the physical state of the player. Players using relaxation techniques may be able to control their thinking to remove tension and conserve energy. According to Bill Beswick a sports psychologist who has worked in top-level football for many years, the ideal performance state for a sport player is that of "relaxed readiness" - possessing energy without tension. It must be mentioned that no relaxation technique is the best. Players should try various techniques until they find one they like and practice it (perhaps 1 or 2 times per day) so it can be used as a means to help in difficult moments. Many athletes seem to use Progressive Muscle Relaxation (PMR), which allows players to learn the difference between relaxation and tension. The player should lie comfortably, close eyes, breath easily, tense then relax all muscles and maintain a passive attitude. Some techniques also use different muscle tense-relax exercises along with breathing exercises and meditation. Deep muscle relaxation is another procedure often used. A player forces his attention onto his left leg for example and imagines it getting heavier and heavier and eventually letting it sink into the floor! Generally, relaxation should result in decreased heart rate, blood pressure, breathing rate and decreased body metabolism.

Anxiety can also strike during a game for example after a mistake. Bill Beswick lists 5 useful tips on how to recover from this.

1/recover breathing control

2/ease the tension out of the body

3/talk yourself back into the positive

4/let the fear go

5/review your goals and reactivate yourself towards achievement.

Dedicated books and tapes are available containing detailed methods for relaxing. However, before using deep relaxing techniques, it is advised that any subject with a physical or mental disorder should consult their doctor. Finally, some sport coaches or players may not like using relaxation techniques. Other methods such as giving each player clear and precise instructions about his tasks and responsibilities (during the team-talk), giving objective information about the opposing team, explaining the risks to be taken and support he will have and giving praise may help to relax players and take their mind away a little from the game.

Sport Psychology Analysis and Interpretation

Jenny described the boy with his foot on the ball as the oldest player who is feeling pressure from others to make a decision on team selection. The primary sport psychology theme for Image 6 is group cohesion, with secondary themes being leadership and team dynamics, confidence, inclusion–exclusion, and rejection. Jenny's story appears to be focused on these sport themes. Jenny indicated that the central character was feeling in a position of responsibility for making a decision that would satisfy all the other children. There was also some conflict for Jenny with the boy's responsibility of picking the next player and feeling that although the girl (the central character's sister) is not good at soccer, there is some pressure to choose her. Questions may be raised and discussed with Jenny regarding issues such as shouldering the responsibility for others'

happiness, and why she interprets the central character's decision as important for his and others' enjoyment. Also interesting to examine with Jenny would be the conflict of wanting to "have the best team," "being fair," and pressure to choose his (her) sister even though "she is shit at soccer." Jenny's response integrated feelings of inclusion–exclusion, rejection, and a strong relationship with a sibling. *Dynamic interpretation* Jenny's story, at first read, seems to be about the older, dominant boy, but Jenny probably identifies with the sister who is "shit at soccer." Given themes evident in Jenny's responses to the other images, she likely identifies with the incompetent young girl who makes mistakes, who is a loser, but who wants to be chosen and have a go. The older competent boy may represent an actual older sibling, or if Jenny does not have an older sibling, then he may represent a fantasized older brother whom she wanted to have around and admire (like some of her other female friends probably had growing up). I did not have a family history on Jenny, so these thoughts are quite speculative. This story may be about wanting to be "chosen," and that desire holds all sorts of possibilities (to be loved, to be valued). Those needs to be chosen and to be valued are thwarted because she is not any good at what she wishes to be chosen for. Jenny may feel that worthiness, attention, and love are contingent on playing well, and she knows she does not have the skills that equate to that worthiness. The older, admired (he is the "best" player) brother is a positive authority figure, but he is caught up in the values of sport (he wants the best team) and cannot make a decision between brotherly protection (he does not want her to be the last one chosen) and being the best. I think the central theme of this story is that there is no solution for Jenny. She may see no way out of her

desire for love and her perceived lack of the qualities (sport skills) that she believes will bring her to that special status of being "chosen" and loved. Jenny may be stuck with no way out. It all comes to naught, and then we just go home (for tea, in this story). The above is a brief example of how someone with a psychodynamic orientation might begin to analyze Jenny's responses. For many in sport psychology, this territory would be rather foreign, and some might even say that this approach is really just spinning Freudian fairy tales. I would disagree and suggest that this approach may be helpful if an athlete, such as Jenny, wants to do some deeper exploration of her life, rather than learn some relaxation for her competition anxiety.

Thoughtful analysis and interpretation of AAT responses may provide an in depth and idiographic understanding of athletes' characteristics, motivations, and anxieties, as well as assisting in the assessment of personality features. At the very least, discussion of AAT responses can be a useful way of initiating dialogue, engaging the client, and possibly unmasking issues that might otherwise lay dormant (latent personal issues, of which athletes may not be consciously aware, or which they may be reluctant to voice openly). Further, the use of the AAT may help sport psychologists identify and assess personality features relevant to performance and the health and wellbeing of athletes. The AAT should not be used as a stand-alone instrument, but rather in conjunction with other sources of information (e.g., questionnaires, intake interviews, ongoing service delivery encounters). The AAT may also become a useful tool in educational settings, and academics in sport psychology programs may find it to be an instructive and challenging tool in the education of applied sport psychology students.

The AAT may also assist educators in providing some balance, in regard to the dominance of paper and pencil self-report measures, when discussing personality assessment administration, analysis, and interpretation. In athlete–sport psychologist encounters, the aim is not to judge athletes' personalities, but to explore and embrace their lives. When used judiciously, projective techniques may be of assistance in revealing athletes' worlds. The AAT, for example, is not a technique designed to predict success in sport, identify leadership skills, measure anxiety, or assign a range of values to explain personality. The AAT follows the developmental and theoretical guidelines of the TAT, and to that extent, is designed to assist sport psychologists in understanding their athletes' motives, attributions, wishes, dreams, conflicts, and desires, and in some ways may help practitioners better serve the people in their care.

Competitive Settings

Even though practice observations are important, we also encourage consultants to observe competitions to gather information not available during practices. Competition observations may provide insight into how athletes behave, react, and interact in outcome-oriented environments with respect to sports personship, pride, shame, and self-worth. Competition also allows for observations of the influence of external factors that are not relevant during practice settings (e.g., responses to perceived errant calls, fan interactions). Finally, competition observations help consultants examine how teams respond to pressure, winning, and losing. An important component of observational assessment is identifying potential discrepancies between practice and competition behaviors. For individual athletes,

discrepancies between practice and competition behaviors may provide evidence about attitudes or sources of motivation. Other individual behaviors to compare between practice and competition include arousal, anxiety, focus and concentration, confidence, and differences in social interactions. It is equally important to identify possible changes in coach behaviors and team interactions from practice to competition settings. Coaches' behaviors can have major effects on athletes, and if these behaviors change between practice and competition, athletes may be confused by the inconsistencies. Inconsistent coaching can leave athletes not knowing what to expect, and can result in anger and a loss of trust. Differences in team interactions between practice and competition may also be useful information for psychologists. How teams behave and how the members interact with one another is indicative of the team climate. If that climate were to change between practice and competition settings, it may signify a disruption in the team unit. It is also important to be aware of any discrepancies between what athletes are saying during one-on-one sessions and their behaviors during observations. Individuals live in their perceived realities, and what they think they are doing and what they are actually doing may be different. For example, if an athlete suggests in session that he is confident about his performance under pressure and then is observed by the psychologist to be cracking under pressure (e.g., errors, negative body language), there may be a disconnect between the athlete's perceptions and reality. This disconnect could be something that the psychologist and athlete discuss in session to figure out what may be happening for the athlete. To be consistent with observations across communication type and settings, practitioners should consider using a behavior tracking from.

Team Processes

By observing teams across settings, consultants can learn how athletes communicate. Communication strategies should be observed in as many situations as possible, but may be particularly informative when teams are under pressure. Stressful and evaluative situations that demonstrate communication patterns include successes and failures, position challenges, and team scrimmages. These situations give information about communication patterns, but also team processes such as leadership characteristics, team support structures, and team roles. *Sport psychology analysis and interpretation* Jenny described the boy with his foot on the ball as the oldest player who is feeling pressure from others to make a decision on team selection. The primary sport psychology theme for Image 6 is group cohesion, with secondary themes being leadership and team dynamics, confidence, inclusion-exclusion, and rejection. Jenny's story appears to be focused on these sport themes. Jenny indicated that the central character was feeling in a position of responsibility for making a decision that would satisfy all the other children. There was also some conflict for Jenny with the boy's responsibility of picking the next player and feeling that although the girl (the central character's sister) is not good at soccer, there is some pressure to choose her. Questions may be raised and discussed with Jenny regarding issues such as shouldering the responsibility for others' happiness, and why she interprets the central character's decision as important for his and others' enjoyment. Also interesting to examine with Jenny would be the conflict of wanting to "have the best team," "being fair," and pressure to choose his (her) sister even though "she is shit at soccer."

Jenny's response integrated feelings of inclusion–exclusion, rejection, and a strong relationship with a sibling.

Therapist Unconditional Positive Regard (UPR)

Person-centered therapists accept clients unconditionally, without judgment. This acceptance facilitates increased self-regard in clients, because they can begin to become aware of experiences in which their views of self-worth were distorted by the influences of others. Depending on the level of competition (e.g., junior, sub-elite, and elite) and the strength of perceived social support, athletes rarely have opportunities to discuss personal, and sometimes painful, issues openly. Discussing how they feel about themselves or their roles in their sports is often perceived by athletes as too risky, especially if their thoughts are unpleasant. These thoughts may clash with the perceptions others may have of them, including fans, coaches, teammates, spouses, parents, and agents. Due to self-induced or perceived external pressures, athletes may feel they will let down or disappoint coaches, teammates, or parents if they express their thoughts or feelings. Furthermore, there is a perceived fear of current or future contracts being put at risk should sponsors become aware of their sport-related anxieties. Therapists' abilities to be nonjudgmental, allowing conversations to happen without negative consequences can prove extremely helpful for athletes to sort out feelings and career, life paths in a psychologically safe place. One example demonstrating UPR is a middle-aged, married, competitive recreational athlete named John who came to see me for performance enhancement for golf. I gained his trust after a number of sessions, and he began to share that he was gay and stated that he had never discussed his sexuality with anyone

before. He felt he could not live in his current situation any longer, but did not know what step to take to move forward. Over the next few months, because of the establishment of a comfortable, safe, nonjudgmental place to explore his feelings, John was able to discuss his issues with his wife and family and made arrangements for separation. Because John sensed non judgment and unconditional positive regard from me, he felt sufficiently comfortable and safe within the relationship to share an incongruent and uncomfortable part of his life. A therapist with UPR sends the message to clients that all that is shared will be cared for, in a respectful, nonjudgmental manner. The UPR stance helps open many closet doors. Most parents of adolescents in my practice are concerned that they may place undue pressure on their children to succeed or continue in their sports. I am asked to explore within sessions whether there is a feeling of pressure coming from one or both parents. If indicated, we discuss this issue collectively to alleviate any misperceptions. In some cases parents are unaware of this pressure. Their vision is myopic, and they lose site of the bigger picture as it applies to their children as whole people. When a situation like this one occurs, it is difficult to meet the therapeutic needs of the client, regardless of the client's recognition of feelings of discomfort or incongruence. For example, a client named Annie was a high school athlete and played for an elite soccer club. The club had the reputation of producing Division I (i.e., highest level of U.S. university competition) collegiate scholarship athletes. Annie's father brought her in because he felt that she was not aggressive enough on the field. He believed that for her to stay on the team, and to eventually obtain a full scholarship, it would be essential for her to be more aggressive. While her father was in the session, she was

quiet, but agreeable to us working together on the presenting issues. Over a period of sessions without her father present, she expressed experiencing a great deal of stress, and said she no longer wanted to play with her particular club or at that level of soccer. She was not ready to discuss this problem openly with her parents because, from her perspective, she knew quitting was not an option: her father was determined that her sport was "*their* path to college." Her mother came into one of the sessions, and when Annie explained how she felt; it was clear that communicating this information caused tension for her mother. Annie's mother stated that they could not discuss this issue with her father. Sometimes parents build their expectations too high and seem to lose perspective. They invest time, money, energy, and sometimes subconsciously their own self-worth into their children's futures. They seem to forget the big picture and the importance of their children and their happiness. What may have started as positive support turns into pressure. In this particular case, because the father did not see results quickly enough with his goal of increasing his daughter's aggression on the field, he refused to continue with additional sessions, so I could no longer help this athlete. Perhaps at some point in her life, this athlete will be able to become whole. It is not always possible to apply the model when there are outside agendas. In this case, it was not possible to apply the model because the father, as well as the mother (because of her own inability to be congruent within the relationship to the father) was not allowing their daughter to communicate what she now desired. Within the therapeutic setting, establishing congruence was outside of our control. Because Annie was not being heard by her parents, in the future she may feign an injury, truly get injured, or sabotage her in some other way.

What will probably result is resentment in the relationship between Annie and her parents until they can communicate about Annie's life more freely and lovingly.

Benefits of Using the Model

There are many advantages to using this model. It is a humanistic, whole-person model that allows athletes to consider how they feel and where they are in the here and now in order to make decisions that will influence many aspects of their experiences for the remainder of their lives. Having the opportunity to process where they are with another human being without judgment and with unconditional positive regard is often a rare experience, especially for athletes. For adolescents, there often is pressure from coaches, and especially parents, who directly or indirectly verbalize how much time, energy, and money has been contributed to their sports, along with expectations of full university scholarships. For professional athletes, there are also perceived and real pressures. Some professional athletes have no one with whom to talk because they perceive that most people involved in their lives have a vested interest in them. Applying this model also allows athletes to be not only introspective, but also able to gain perspective. Participating in sport is one aspect of life; it does not make up the whole.

Disadvantages of Using the Model

The disadvantages of using this model depend on the context in which the athletes are being seen. Although there are times athletes may be struggling about wanting to be involved in their sports or just wanting to improve mental performances, as they aspire or begin to climb the ranks as elite athletes, they

automatically begin to create imbalances in their lives. There are times when sacrifices will be made and seeing what may be missing from their lives (e.g., social opportunities, perceived normal activities) may feel daunting or overwhelming, and perhaps impossible. Another disadvantage of the model, especially if used exclusively, is not having a set agenda with the number of sessions or the content of the sessions. Athletes are used to having a plan placed in front of them and being coached through issues. When using this model, clients are the true drivers of the agenda, not the therapist. This model may be too slow and loose for result oriented athletes. Additionally, using this model in isolation may not be economically feasible for many, because there is no set number of sessions. Exploring one's life will take time, and can be troublesome if an athlete is already in the midst of a busy and demanding competitive season. There is also a risk, especially if athletes are in season, that they may temporarily perform worse due to being emotionally distracted from examining various in congruencies in their lives. Athletes are used to being coached. Even though giving athletes space to discuss what is occurring in their environments is helpful, they are also looking for direction and effective techniques from the therapist. Using a combination of modalities seems to be beneficial. For example, using in-between session homework employed in a cognitive behavioral approach creates a familiar structure and gives a measurable means of improvement for the athlete, aiding in the ability to create relatively rapid change.

In sport, players may need to develop relaxation skills to counter moments of stress and anxiety, which are interrelated. Not only does relaxation help reduce stress and anxiety but can facilitate rest and recovery. Players also

need to develop a positive way of looking at the game during moments of difficulty. The coach needs to be aware of the various signs and symptoms of players suffering from stress and anxiety. A Sports Psychologist can help players to reach and stay at their maximal potential.

The Use of Mental Imagery in Football

Mental imagery in sport may be described as the repetition of a particular skill or movement sequence using *pictures* rather than actual physical movement. In other words it requires players to *imagine* them playing sport. Imagery creates or recreates experiences that players have "lived" and aims at familiarising players with their tasks. Other terms describing are mental *rehearsal* and *visualisation*. There are two types of imagery:

External: Where a player experiences imagery as though they were watching themselves on a videocassette.

Internal: Where a player experiences imagery as though they are actually performing the action.

It seems that internal imagery is more beneficial as it is more likely to recreate the actual sensations of competition performance. However, external imagery may be useful to build up confidence levels as footballers can see themselves "playing well" and also know that the coach and fans are seeing the same thing. So why use imagery? Many players and coaches believe that it can help improve their game through the systematic mental practice of skill and helps players to focus and refocus before, during and after competition. Beswick (sports psychologist for Manchester Utd) lists several benefits of imagery for players and coaches:

- Reinforces self-belief and players see themselves as winners

- Learn self-control and developed strategies to cope.

- Practice mentally what they experience in the game

- Learn to focus and shut out distractions

- Improve relaxation and links mind and body to produce the right state of energy.

It can also be useful to allow players to visit the opponents ground prior to a match. This allows the imagery about next day's game to become even more vivid and thus more effective. Players can also use pre-match visualisation during their warm-up. They can rehearse their first involvement in the game such as a pass or tackle and also the general quintessence of their match play. In certain situations such as penalty shootouts, a player with effective visualisation training may be at an advantage. This can prepare them for the pressure of the kick by creating disciplined performance routines. Thus, whilst preparing for their turn, they can be mentally rehearsing their technique (already mastered through training and visualisation) and this will help keep their confidence and remove any distractions such as crowd noise. Visualisation may be useful in stress management. Players can ask themselves what if a stressful situation arises and how they will feel. They can then visualise how they should react to regain control. Imagery is useful alongside relaxation techniques to avoid stress. Another area where imagery can play a part is player confidence. Players who visualise themselves as winners are more likely to succeed in sport. Also, finding the right state of energy is important. Mind and body are one so the body of a player who

visualises positively, will prepare itself positively through increasing energy. Of course, players who negatively visualise performance will suffer and this needs to be turned around. Finally, imagery can also allow players to rehearse skills when training is not possible. An injured player can use imagery to visualise his injury in a more positive way and to mentally practice his skills in preparation for being back in training.

The Mental Imagery Session

When undertaking visualization sessions, it is important to respect several major points in order to fully benefit from this type of practice:

–   Use consistent, short, intense sessions and build up them up slowly

–   Use a quiet room where you will not be disturbed

–   Be relaxed but alert

–   Set realistic attainable goals

–   Picture should be done in a real environment as is more realistic, e.g. a penalty kicks in a game

–   Perform the skill from the beginning to end and at normal speed

–   Always imagine the action is successful & avoid rehearsing errors

–   Try to feel the movement using all your senses - physical sensation, sight, smell.

Players must imagine themselves in action on the sport field. They can clearly see the scenes, the colour of the shirts, and the sound of the boot on the ball, feel the ground under

their feet, hear the sound of the crowd and recognise the voice of their coach. Everything must be done correctly, nothing negative can be allowed to affect them and everything is vividly realistic. Once players have mastered the basic habits of imagery, they can start working on specific problems such as technique – shooting, heading, passing, and ball control. It may be useful to have a written copy of a visualization practice using a stimulus-response procedure. This involves the stimulus from the situation (defender, pitch etc) and the response of the player undertaking the action. For example: an indirect free-kick situation.

Stimulus: I see our player touching the free kick and the ball laid off in front of me. I hear the defence shouting "close him down" and see their defender moving towards me at pace, perhaps too quickly. I see the goalkeeper positioned slightly to the right of his goal.

Response: I fake to shoot and pull the ball back onto my other foot. I adjust my body and make room for the shot.

Stimulus: I see and feel the defender go past me and then see a slight gap at the left post. I hear my teammates shouting, "Shoot." I see the goalkeeper, seemingly off-balance after my dummy.

Response: I see and strike the ball, feeling my head over it, my non-kicking leg next to it and my shooting leg following cleanly through. I feel my body slightly overbalance as I watch the ball whistle into the bottom left corner of the net. Analysing your session can be useful as well. Could you see and feel yourself perform the skills, was it clear and

at normal speed? Were you relaxed but alert and was the picture clear? Taking notes can as well be useful for highlighting any weaknesses in your imagery session in order to work on and gradually improve them. Overall, imagery can be useful in helping improve sport performance. The better players see themselves and their performance, the greater the chance of success. Various aspects of the game such as confidence, stress management, technique and game preparation can all be improved using good visualisation methods. Remember, what you see is nearly always what you get.

Activation Arousal

Activation or arousal is a term frequently used in Sport Psychology. It is the energy level we feel before or while performing. We might be familiar with it when we feel butterflies before we go on stage, or when we have racing thoughts about what others might think of our performance etc. Yet, activation is actually not associated with a positive or negative behavior. Every situation demands its own activation level and every person has an individual response to different activation levels for specific tasks. When the butterflies turn into stomach ache or the thoughts turn into self doubts, then the activation level might simply be too high for the task at hand.

Definitions of Arousal and Anxiety

The terms arousal and anxiety are often confused and used interchangeably. Although there is some overlap, they are conceptually different. Arousal is defined as a blend of physiological and psychological activity in a person falling along a continuum from deep sleep to extreme excitation. Arousal is not automatically associated with either pleasant or unpleasant events. For example, individuals could become highly aroused winning the lottery or learning about a death in the family. Increases in arousal are intimately associated with sympathetic nervous system activation, whereas it is the parasympathetic nervous system that is engaged when

an athlete becomes more relaxed. Anxiety is defined as a negative emotional state (feeling fearful and uncomfortable, experiencing dread) characterized by nervousness, worry, and apprehension and associated with activation or arousal of the body. Anxiety has a thought component (e.g., worry, apprehension) called cognitive anxiety. It also has a somatic component that is the degree of physical activation (e.g., increased heart rate, generalized muscle tension, galvanic skin response). So, a racing heart and an increased respiration rate could be an increase in arousal or anxiety depending on the context of the situation.

Assessment of Arousal

The primary way to determine athletes' arousal levels is to observe or measure their physiological reactions. Athletes can sometimes hide symptoms, making it difficult to determine arousal levels simply by observing athletes' physical reactions. In addition, sport psychology consultants often do not observe athletes extensively when the latter are actively engaging in their sports, so they do not notice these symptoms if they happen to be there. Despite these limitations it is instructive to know typical physiological reactions to increases in arousal that directly involve the cardiovascular system and the classic "flight or fight" response with blood rushing to the large muscle groups as the body prepares for action. Some typical sympathetic physiological reactions include (a) accelerated heart rate, (b) increases in galvanic skin response (sweating), (c) increased blood pressure, (d) nausea or abdominal distress, (e) shortness of breath, (f) increased generalized muscle tension, (g) trembling or shaking, and (h) feeling dizzy, lightheaded. These symptoms should not be confused, however, with the

normal physiological reactions to physical activity. Heart rate monitors, for example, cannot differentiate between increased heart rate as a result of running and rapid heart rate due to perceived excitement or fear. Although not as observable, some cognitive and behavioral symptoms of increases in arousal can include (a) excess worry and apprehension, (b) difficulty concentrating, (c) difficulty making decisions, (d) rumination, (e) withdrawal or isolation, and (f) difficulty staying on task.

Arousal – Performance Relationship

Over the years there have been many theories put forth to explain the relationship between arousal and performance, but one constant has been the idea that there seems to be an optimal level of arousal at which athletes perform their best. Instead of attempting to review all the theories and their different predictions, I will focus on one approach that has practical implications for consulting with athletes.

Matching Best Performance with Arousal Levels

Determining arousal levels is only one part of what is needed; over several competitions, performance should also be assessed. Performance can be measured either objectively or subjectively. For example, in assessing basketball performance, one could simply look at a player's objective performance in relation to such things as scoring (shooting percentage), assists, rebounds, steals, and so forth and develop a composite performance assessment.

Alternatively, the athlete (or the coach) could rate her performance in relation to how she normally plays from "1" (much worse than usual) to "11" (much better than usual).

The first way appears to be the more objective, but it is dependent on the performances of teammates and opponents.

After assessing both arousal and performance for several competitions, one is now ready to create a zone of optimal functioning using the best performances and the arousal states that are associated with these top performances. A researcher used plus/minus a half of a standard deviation (that was plus or minus 4 on the State Anxiety Inventory). But you can create a zone you want based on scores on a test (e.g., Positive and Negative Affect Scale) or on certain autonomic nervous system reactions such as heart rate or breathing rate. The goal, then, would be to regulate arousal levels so that the desired optimal levels (associated with top performance) would be achieved at least just prior to performance. It then becomes the athlete's responsibility to try to maintain this zone throughout competition. The next section contains some techniques and references for regulating arousal levels.

Relaxation Strategies

For most athletes, the problem is usually too much arousal as opposed to too little, particularly during important competitions or games. Therefore, the focus has often been on reducing arousal, because the many potential negative effects, both physical (e.g., tight muscles, racing heart) and mental (e.g., inappropriate Attentional focus, poor decision making), can produce decreases in performance. The old adage of "giving 110%" does not really work because athletes tend to tense all their muscles in attempting to give 110% effort (not to mention it being impossible to give more than 100%).

Skilled performance usually involves an intricate interplay between having some muscles relaxed while others are contracting.

Simply trying to relax usually will not work. The relaxation techniques need to be systematically practiced so that athletes learn different techniques to achieve relaxation. Consultants working with athletes should always be cognizant of the matching hypothesis, which basically states that an arousal management technique should be matched to meet the needs of the individual. For example, worry and apprehension should be treated with techniques that focus on calming the negative cognitions, and unwanted physiological activation should be treated with physical relaxation (e.g., progressive muscular relaxation, diaphragmatic breathing).

Breath Control

One of the easiest but most effective ways to reduce arousal is through breath control. When under pressure, many athletes do not breathe efficiently. All breaths have inhalation and exhalation phases with inhalation producing tension and exhalation producing relaxation. In many relaxation exercises the inhalation phase is be shorter than the exhalation phase (a 1:2 ratio is often used). That is, if athletes inhale for two seconds they should exhale for approximately four seconds, or if they inhale for three seconds they should exhale for six seconds. A final point is that each breath should come from the diaphragm (belly) because this produces deeper and slower breathing by drawing the breath fully into the lower parts of the lungs. To practice breath control, athletes should take a deep complete breath and imagine the lungs are divided into three levels. They should focus on filling

the lower level of the lungs with air, first by pushing the diaphragm down and forcing the abdomen out. Then they should fill the middle portion of the lungs by expanding the chest cavity and raising the rib cage. Finally, the upper level of the lungs should be filled by raising the chest and shoulders slightly. After briefly inhaling, exhale slowly by pulling the abdomen in and lowering the shoulders and chest. By focusing on the lowering (inhalation) and rising (exhalation) of the diaphragm, they will experience an increased sense of stability, centeredness, and relaxation. Breath control is particularly useful during a break in the action or before performing a specific skill such as serving in tennis, hitting a golf ball, kicking a field goal, taking a penalty shot in soccer, or before starting a gymnastic routine or figure skating program. Finally, although breathing generally is a somatically-based strategy, if athletes focus on their breathing, breath control has the added benefit of reducing negative thoughts because cognitions such as mentally counting the seconds of inhalation and exhalation keep one focused on numbers and breathing so there is little room for other unwanted thoughts.

Progressive Muscular Relaxation

When it comes to relaxation, the "gold standard" is probably progressive muscular relaxation (PMR) originally developed by Jacobson in 1938. PMR rests on several basic assumptions:

(a) It is possible to learn the difference between tension and relaxation in the muscles;

(b) Tension and relaxation are mutually exclusive – it is not possible for a muscle to be tense and relaxed at the same time;

(c) Relaxation of the body through decreased muscle tension will lead to fewer anxious thoughts because one cannot be worried and relaxed at the same time.

It is called progressive muscular relaxation because one progressively contracts and relaxes each major muscle group until all targeted muscles are relaxed. The tension–relaxation cycles develop an athlete's awareness of the difference between tension and lack of tension in the muscles. Each cycle involves maximally contracting one specific muscle group and then attempting to relax that same muscle group as much as possible, all the while focusing on the different sensations of tension and relaxation. With practice, athletes can detect tension in a specific muscle or area of the body, and then relax that muscle. Prior to or within competition, if athletes feel that they are tight/tense in certain areas of the body (e.g., many people manifest anxiety in the neck and shoulder areas), then they can scan their bodies for any residual tension and use PMR to relax those specific muscles. The first few sessions of progressive relaxation can take about 30 minutes, although less time is necessary as athletes develop the ability to relax. Because the original PMR protocol can take some time to learn and implement, Ost in 1988 developed a variation of PMR that allows athletes to relax in a shorter time frame. Specifically, the first phase of training involves a 15-minute progressive relaxation session practiced twice a day in which targeted muscle groups are tensed. The individual then moves to a relax-only phase that takes 5–7 minutes. The time is next reduced to a 2- to 3-minute version with the use of the self-instructional cue, "relax." This time is finally reduced until only a few seconds are required, making the technique useful in actual sport situations.

Relaxation Response

Herbert Benson popularized a clinically validated way of relaxing that he called the relaxation response. Benson's method applies the basic principles of meditation, but does not contain any spiritual or religious connotations. The state of mind produced by this technique is characterized by keen awareness, effortlessness, relaxation, spontaneity, and focused attention. The four basic steps include the following (20–30 minutes):

1. *Quiet environment:* External distractions are at a minimum.

2. *Comfortable position*: No set position as long as the athletes can hold the position throughout the procedure.

3. *Mental device:* Focusing on a single thought or word and repeating it over and over.

   For example, words such as ease, calm, or relax would be repeated in conjunction with exhaling.

4. *Passive attitude*: If while repeating the mental devices other thoughts enter their minds, the athletes should not attend to them and instead let them simply go out of their minds. Athletes should then refocus attention on the mental devices.

Autogenic Training

Schultz developed autogenic training in the 1930s and refined it with the help of Luthe in 1969. This relaxation process has been used extensively in Europe but less so in North America. Autogenic training consists of a series

of exercises designed to produce sensations of warmth and heaviness. Basically it is a technique of self hypnosis where attention is focused on the sensations one is trying to produce. The autogenic training program is based on six hierarchical stages that usually are learned in the following order: (a) heaviness in the extremities, (b) warmth in the extremities, (c) regulation of cardiac activity, (d) regulation of breathing, (e) abdominal warmth, and (f) cooling of the forehead.

The statements "my right arm is heavy," "my right arms is warm and relaxed, "my heartbeat is regular and calm"and"my forehead is cool" are examples of commonly used verbal cues in autogenic training. It may take several months of regular practice (10 to 40 minutes per day) to become proficient in experiencing warmth and heaviness in the legs along with changes in cardiac and respiratory cycles (that is one reason why it probably did not catch on in time-poor North America).

Pre-Competition Routines

Two sources that may bring about debilitative arousal in athletes are uncertainty and loss of control. There are many things in athletes' environments that are out of their control, such as the weather, officials, opponents, spectators, and coaches. These situations and people external to athletes can cause arousal levels to rise past optimal levels. One way to take control of the situation is through the use of pre-competition or competition routines. Routines are structured, systematic ways of thinking and behaving when preparing for competition or for events occurring throughout competition. These routines are within the control of

athletes and can be followed regardless of the situation or external events. In addition, routines work by helping athletes divert their attention from task-irrelevant (usually negative thoughts such as "what will my teammates think if I miss this field goal") to task-relevant cognitions ("just keep your head down"). Routines may increase the likelihood that athletes will not be distracted internally or externally prior to, or during performance. For example, many athletes have developed specific routines before performance such as serving in tennis, hitting a golf ball, kicking a field goal, shooting a free throw, and taking a penalty shot. See Chapter 56 for more information about pre-performance routines.

Cognitive-Affective Stress Management Training (SMT)

SMT is a comprehensive package of techniques designed to produce an integrated coping response (Smith, 1980). SMT offers specific intervention strategies, such as relaxation (PMR), cognitive restructuring (reframing, positive self-talk), and self-instructional training ("keep your head down"). There are four distinct phases: (a) pretreatment assessment – assessing the situations causing stress, the athletes' reactions to stress, and how stress affects the athletes; (b) treatment rationale – understanding their stress reactions and that the treatment is to assist them in gaining control and coping with stress; (c) skill acquisition – learning different skills including relaxation, cognitive restructuring, and self-instructional cues; and (d) skill rehearsal – deliberately introducing stress so athletes can use the skills acquired to practice coping with the stress.

Imagery

One of the easiest ways for athletes to relax is through imagery. By consciously visualizing a relaxing image, athletes allow their bodies to unwind and relax. For example, athletes can imagine the blood flowing into their muscles to increase their warmth and elasticity or imagine drinking a warm liquid and feeling it seep through their bodies, relaxing their arms, legs, shoulders, necks, backs, and trunk. Furthermore, athletes can imagine a situation that has caused them to become over aroused in the past (e.g., shooting critical free throws at the end of a game) and see themselves coping with this over arousal (by using one of the aforementioned techniques). Imagined events stimulate us, much like real events, so athletes can practice their relaxation through imagining themselves, for example, staying calm in a tense competitive situation.

Self-Talk

Self-talk is basically a verbal monologue athletes have with themselves that can either be out loud or just inside their heads (auditory imagery). Although self talk can take many forms, it is usually categorized into three types: positive (motivational) self-talk (e.g., "I can do it") that focuses on increasing energy and effort and staying positive; instructional selftalk (e.g., "bend your knees") that helps athletes stay focused on task-relevant cues; and negative self-talk (e.g., "that was a stupid shot") that usually creates unease and fosters self doubt.

The basic idea of using some sort of positive/instructional self-talk is that athletes gain the ability to talk themselves

into calming down, putting forth effort, or staying focused. Words and phrases such as "slow down," breathe and relax," and "calm" are self suggestions that can remind athletes to stay calm and relaxed during critical and stressful points during competition or regularly throughout competition. For example, runners could remind themselves to "keep their shoulders relaxed" or golfers could remind themselves to "relax and take a deep breath" before important shots. It is often assumed that negative events cause stress. Psychologists, however, have come to understand that it is often the self-talk that comes after the negative event that produces athletes' stress reactions. For example, after a poor performance, a baseball player might say "I just can't play in the major leagues," which could result in the player feeling stressed, anxious, frustrated, and hopeless. Given the same situation, however, another player might say "I just need to work more on being more patient at the plate," which could result in increased effort, motivation, and optimism. Research across a wide variety of sports has consistently revealed that performance is increased after positive and instructional self-talk but decreased after negative self-talk. Changing negative to positive self-talk may not only reduce stress but may also increase performance.

Arousal-Inducing Techniques

As noted earlier, a major problem for athletes is being over-aroused or being too "pumped up." There are, however, times when intensity levels need to be increased, such as when athletes are feeling lackadaisical, tired, or possibly overconfident. Under-arousal is usually more of an issue during training than during competition. Whenever it occurs, coaches need to be careful not to overly psych athletes

up with pre-game pep talks and motivational speeches because these talks can be debilitative for some athletes. So if arousal is going to be raised, it should be done in a deliberate fashion with awareness of optimal arousal states. Some signs of being under activated or under aroused might include (a) constantly wandering thoughts, (b) feeling bored or uninterested, (c) heavy feeling in the legs, (d) moving slowly, and (e) lack of anticipation/enthusiasm. There are a number of techniques that athletes can use to become more energized including the following:

Increase Breathing Rate

Short, quick breaths can help energize athletes. When increasing activation the focus is on inhalation instead of exhalation. To increase the effect, athletes say "energy in" with each inhalation and "fatigue out" with each exhalation.

Physical Activity

Jumping up and down, slapping thighs, and pumping fists can all stimulate blood flow and increase activation. For example, tennis players often bounce on the balls of their feet before serving or receiving serve. In addition, before competition, some athletes like to work out and get a sweat going to get them activated for competition.

Mood Words / Positive Statements

Thinking can certainly affect physiology. For example, saying or thinking mood words (e.g., hustle, strong, move, tough, quick) can get the athlete activated. In addition positive self-statements such as "hang in there," "get tough," "get going" and "I can do it" can also raise arousal levels.

Act Energized

Sometimes athletes might not feel energetic and motivated, but if they act pumped up they can often recapture their high energy levels. Head up, shoulders back, and walking quickly are some actions that can increase arousal.

Upbeat Music

Listening to fast, upbeat music or a favorite tune can sometimes help athletes become activated, enthusiastic, and ready for competition. Many athletes now use headphones and iPods to listen to energetic music before competition to help increase arousal and create positive feelings.

Energizing Imagery

As noted earlier, imagery can be used for relaxation. Imagery can also be used to generate positive feelings and energy. Energizing imagery involves visualizing something that is exciting to the individual. For example, a sprinter might imagine a cheetah running swiftly over the plains or a swimmer might imagine moving through the water like a shark.

Summary

In this chapter I have discussed the arousal–performance relationship, with a special focus on ways in which to regulate arousal levels. Our goal is to find the optimal levels of activation appropriate for the energy needed for our particular performance situation. During a musical performance high activation levels are often perceived as unpleasant and referred to performance anxiety, stress or

distress. There are, however, some performers who can use these high levels of activation in a constructive way. Some butterflies actually inspire performers to push themselves to their limits.

This chart shows a specific activation-performance relationship curve.

Performer XYZ's optimal level of activation
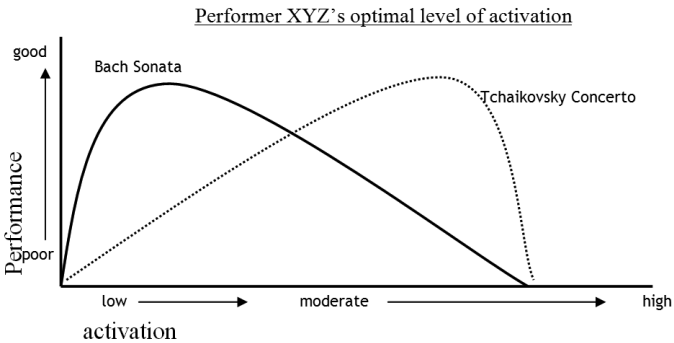
Even though each task and each individual will demand varying degrees of activation, some factors are fairly predictable. Personality, Experience and Preparation influence the ideal activation level.

Chapter 5

Anxiety in Sport

In reflecting on approximately 50 years of continuous sport anxiety investigations, there was a naive quality to the early research with one-dimensional models developed, reworked, and then eventually superseded by more complex, yet similarly inadequate models. A sign of the growing maturity of the field of sport psychology was when researchers took the lead from mainstream psychology and started examining sport anxiety as a multi-dimensional phenomenon. Currently, there is a diverse range of published literature compared to the early research that was largely experimental and quasi-experimental conducted from a narrow quantitative paradigm. I have written this chapter from a practitioner's perspective, and the focus is largely on working through how we might frame our collaborations with anxious athletes. Rather than explaining the fundamentals of anxiety theories, I only touch on the models used in the research in the context of theory informing practice. Undoubtedly, a sport psychology practitioner must have at least a passing understanding of the vast sport anxiety literature. For early career sport psychologists, in particular, there is considerable value in reviewing the key or hallmark sport anxiety papers. Experienced practitioners also sometimes need reminding that new approaches and critical knowledge are regularly being developed and published, and staying abreast of such developments is professionally enriching.

Framing Anxiety: Complexities in Working With Anxious Athletes

In sport psychology, we are often working in the context of athletes or organizations wanting quick-fix solutions. Sometimes, there is a simple solution; a reliance on quick or generic approaches, however, can trivialize the work. Our training and experience should enable us to provide individualized anxiety interventions that represent state-of-the-art in relation to the currently available evidence in our field. By the time an athlete seeks or requests help for an anxiety-related issue, there is usually a rich history of unsuccessful (or partially successful) attempts to cope with anxiety. This history needs to be respected and used where applicable. Often, in trainee sport psychologists, I see an over eagerness to move to solutions, treatments, and interventions without fully understanding the personal history and appreciating the unique perspectives and experiences that each client brings to therapy. Perhaps this tendency is borne from practitioners' anxieties around their own skills or insecurities about working in an open framework. Irrespective of the reasons, to provide meaningful solutions for athletes and coaches, superficial or abbreviated processes are generally suboptimal and may have quick, but not long lasting effects.

Applied sport psychologists can enhance the likelihood of positive outcomes by intentionally managing the working relationship from the outset. Each time we commit to working with a client we embark on a journey together. This journey might be over almost before it begins, unless we attend to some basic, yet essential steps. Many years ago an academic sport psychologist talking about his applied work

said to me, "I don't know what it is with clients, but many of them only show up for the first couple of consultations." Although clients can be unreliable, there was clearly an unrecognized problem with how the sport psychologist was framing his work at the outset. Setting-up includes: the initial contact or referral process, managing the working space, introductions, first impressions, sharing expectations, and developing a working alliance. Each step deserves careful consideration, and, when done well will lead to a positive climate for working together, but when done poorly will result in obstruction, confusion, or sabotage of the working relationship.

Logistics and practicalities almost always influence the approaches we take and how we deliver our services. How has the client been referred? Who is funding the services? Is the athlete in season or in a pre-season phase? In what type of environment will the consultations take place (e.g., office, coffee shop/café, sporting venue)? There is little sense planning a lengthy series of psycho-educational sessions when time, resources, or other issues preclude the likelihood of the full intervention being delivered. Poor attention or awareness of practicalities can hijack the working alliance and undermine the practitioners' confidence and clients' motivation to commit to working through the issues.

Because anxiety in sport is multifaceted, exploration or data-gathering is foundational. Most sport psychologists, because of their research and applied training, will feel relatively comfortable in this exploration phase. The initial intake will generally start with demographic, personal, and sport background and at some point move to the presenting anxiety related issue. Exploration will not only entail

polished counseling skills (e.g., attending, active listening, empathic reflection), but also working with anxiety through linking related themes such as stress, arousal, coping, and past history of anxiety experiences. Fortunately, there is an enormous amount of published literature available on sport anxiety, but the sheer volume of literature can be intimidating. Sport psychology researchers have constantly proposed and tested relevant models ranging from arousal-performance explanations to multidimensional anxiety theory. Without a reasonable understanding of the many conceptual advances that have occurred in sport anxiety research, the practitioner's efforts will most likely lead to limited positive (or even negative) outcomes. Leonardo da Vinci's (n.d.) observation that "he who loves practice without theory is like the sailor who boards a ship without a rudder and compass and never knows where he may cast" is relevant here. For busy consulting psychologists engrossed in applied work, it can be a challenge to stay abreast of the published literature.

Getting a Handle on the Causes and Effects of Sport Anxiety

A central purpose of the exploration process is to jointly discuss, sometimes in considerable detail, anxiety experiences and anxiety-related issues. I liken sport anxiety work to solving a jigsaw puzzle. Rarely are we are faced with a simple 200-piece puzzle, often the puzzle is, metaphorically, 1,000 pieces or more of a relatively unexplored landscape. The simple puzzle might suit neophyte sport psychologists who, being somewhat anxious themselves, are looking to apply basic theory and interventions in a relatively straightforward manner. More experienced and skilled

practitioners might be drawn to 1,000-piece anxiety puzzles with unfamiliar terrain, complications, contradictions, and entrenched resistances. Undue haste in moving toward possible solutions without thorough exploration can be counterproductive.

In looking for guidance in the types of issues worthy of deeper exploration, the published literature is particularly helpful. Quality research is available in peer reviewed journals relating to virtually all the exploration issues that, for brevity, are simply listed below:

- Susceptibility, underling causes, triggers, and context (sporting task, level of competition, or environment) – possible parallels in general and other performance domains, state-trait anxiety indicators, defining events, external factors, assessing associated anxiety clusters (e.g., arousal, stress, fear, pressure, self-consciousness, choking, yips);
- Effects – the range of cognitive, somatic, and behavioral manifestations, acute/ chronic anxiety, performance facilitation and debilitation, directional interpretations, emotional and motivational consequences;
- Maintenance factors – conscious and unconscious motivation to not resolve anxiety related issues, role of significant others, environments;
- Coping resources – social and environmental support, coping style, resilience;
- Other factors – personal insight, attempts to self-manage anxiety, personality (e.g., neuroticism), knowledge, evidence of overlapping sport psychology themes (e.g., concentration, self-talk,

self-confidence, attributions), understanding and expectations of applied sport psychology assistance.

Sport psychologists borrow the term *treatment* from mainstream psychology, but the term sometimes carries unhelpful connotations, and the word *assistance* might be preferable.

There are no definitive lines around where treatment begins. For example, we need to acknowledge that the process of talking about anxiety-related issues, and being heard by an understanding professional, are beneficial for many clients, albeit anxiety-inducing in the short term only. Depending on the approach taken, the talking might even constitute the central feature of the therapy (e.g., narrative therapy). With sport anxiety work there is quite a range of available treatments, programs, techniques, and interventions. The sport psychology literature is replete with research and evidence about the efficacy of treatments. Most practitioners are aware of frequently used approaches such as progressive muscle relaxation, meditation, breathing exercises, autogenic training, and the suite of cognitive-behavioral methods (e.g., rational–emotive behavior therapy, stress inoculation training). A common theme for the neophyte practitioner is the sometimes unrealistic expectations, and occasionally blind faith, accorded to what amounts to packaged treatment programs without due care in individualizing the treatment in the context of the client's particular needs. Depending on our psychological orientations, the approaches and interventions can differ substantially. Much of the published sport anxiety literature is essentially cognitive behavioral with infrequent smatterings of alternative approaches. Our frame of reference might be limited because of the paucity

of published sport psychology intervention literature reflecting broader perspectives (e.g., humanistic, existential, psychodynamic, narrative).

Hearing the Client's Story

A number of practical issues warrant further consideration including: psychological orientation or paradigm, practitioners' professional range and skills, integration of client skills, practical considerations, supervision, mentoring, and professional support. Often our approach to therapy is not only guided by our own preferences and expertise but also the working time frame. Athletes who have the time, resources, and patience to commit to long-term therapy are rare. An initial challenge for the practitioner is in fostering a working alliance whereby negative emotions, such as anxiety, can be discussed openly, authentically, and none judgmentally. There are some athletes who are especially candid about the effects that their anxieties are having on their sports performances, enjoyment, and their sense of satisfaction.

My overriding experience is that athletes, for a range of reasons, tend to minimize the effects of their anxieties. Anxiety, for many athletes, is linked with negative memories, associations, and experiences that can be mentally difficult to share and reconstruct openly. Furthermore, associated emotions of shame, guilt, and embarrassment are often close at hand. Barriers to open disclosure may impede our progress or frustrate our attempts to help athletes. These barriers might represent a lack of trust or confidence in the sport psychologist or in sport psychology. Barriers might also stem from inner struggles to fully acknowledge anxiety,

fears of admitting what might be perceived as a weakness, or poor timing with athletes (for myriad reasons) not wanting to work through the issue at present. Also, sometimes athletes unrealistically desire an abbreviated consulting exchange with the hope of a quick outcome in keeping with pressing competition commitments. A competing athlete is often attempting, simultaneously, to manage the impinging anxiety and trying to foster a positive mindset, whereby negative thoughts and emotions are downplayed. In working with anxiety, we frequently rely on the retrospective recall of clients that, although not deliberately distorted, often entails elements of impression management that diminish the conscious acceptance and verbalization of anxiety. Unless the anxiety is severe and essentially crippling in terms of performance, the reality is that many athletes do not seek professional support. At some point, usually in the intake session, the client will start to raise anxiety-related themes. Although it may be tempting to dive right into a detailed account of anxiety issues, generally I continue the intake consult taking note of other topics of therapeutic interest. Once I have established the athlete is being affected by anxiety or related issues (e.g., stress, arousal, poor coping), I will start to devise a plan within a particular framework.

Another series of self-questions are salient at this point. What approach should I take to fully understand the etiology of the anxiety? For example, will a case history focused on anxiety-inducing events be useful? To what extent are others (e.g., coaches, parents, and partners) involved in terms of instigating, reinforcing, understanding, or managing the anxiety? How does the pattern of anxiety being presented fit with examples from previous consultations? What level of self-insight is the client displaying? How the issues being

raised do fit with the vast body of available anxiety research including performance- arousal theories, underlying causes and effects of anxiety, multidimensional anxiety theory, and treatment choices? What broad theoretical approach (e.g., cognitive behavioral, psychodynamic) will frame the treatment? Will observation of the athlete training or competing be useful in understanding how this athlete experiences anxiety?

Would administering any of the available anxiety-related tests add to the assessment? These questions and others might best fit under the general aim of what to me is "dwelling in the problem." That is, gathering information, reflecting, observing, developing, and testing tentative hypotheses.

The Edmonton Fog: The Palpitating Effects of Anxiety With Rifle Shooters

When completing my master's research at the University of Alberta in the early 1990s, I was working with a small group of rifle shooters. I had the good fortune to be collecting heart-rate data during the Canadian National Championships when, prior to the first round, a dense fog descended on the shooting range. The ensuing 30 minutes of observation taught me plenty about the realities of anxiety and the range of individual responses. The targets became almost impossible to distinguish at 50 meters; the shooters became anxious, and heart rates escalated. Not surprisingly, shooting performances were relatively poor, but some of the shooters adapted quickly and effectively whereas others appeared to be ill equipped mentally to deal with this unexpected event. The Edmonton fog reinforced how useful

first-hand observation can be. In later years when working with anxiety-related issues, I have drawn on lessons learned in the circumstances that morning in Edmonton. I expect other practitioners will have similar experiences where they have witnessed events first hand and gained new insights into how anxiety can manifest in high-level competition. Such learning is not necessarily restricted to situations where we are insiders working directly with athletes. For example, attending high-level sports events as a spectator or observer, although not affording direct interaction with athletes, still represents excellent opportunities to observe athletes coping with pressure and self-managing arousal, stress, and anxiety.

Choking and Anxiety

The term choking is closely associated with anxiety and inevitably, for some clients, an assessment of anxiety symptoms will lead to the question: Is this athlete experiencing general anxiety or the more extreme anxiety response of choking? Although there has been a good deal of research on choking in recent years, a differentiation between anxiety and choking is not clear cut. Mesagno, defined choking as "a critical deterioration in the execution of habitual processes as a result of an elevation in anxiety levels under perceived pressure, leading to a substandard performance." Moreover, the majority of published choking research emphasizes the dual presence of elevated anxiety and ineffective Attentional processes in producing choking. Choking is not restricted to sport, and the colloquial understanding of choking is similar to the above definition. For example, popular rapper Eminem recorded the song *Lose Yourself*. The song includes insightful lyrics into a choking experience from the point of view of a musician-performer (the reader can go to any

number of websites to read the lyrics, such as *Lose Yourself* can be a really powerful medium when working with athletes who present with choking. The lyrics encapsulate the choking experience and can really resonate with athletes. In a consultation, choosing to use stimulus material, such as the lyrics of a song, or a powerful image, can circumvent extended descriptive dialogue and help the athlete feel understood. In working with a choking-susceptible athlete, many of the same techniques and topics normally used with anxiety and attention regulation are still relevant (imagery, coping skills, building confidence, working on self-talk, moderating expectations, improving mental toughness). Hanton, recommended multimodal treatments that might combine elements of the above. In terms of specific choking reduction techniques, two studies have successfully used routines and music to counter choking susceptibility.

Facilitating Change: Managing Sport Anxiety

There is no shortage of applied research and dedicated text chapters specifically about anxiety in sport to inform practitioners; the challenge is in making the right choices about how best to assist an anxious athlete. Some practitioners may choose to use sport anxiety assessment tools. As with all assessment measures, these tools are helpful if they provide additional information, facilitate client-consultant dialogue, or assist in planning individualized treatments. In working with sport anxiety, we need to draw on what effective coping skills the athlete has already developed. Athletes, often through trial and error, are quite innovative in developing strategies that work for them. Drawing out stories of when the athlete has successfully managed anxiety and performed well can positively change

the tone of a consultation. A balanced approach whereby we are focusing on both facilitative and debilitative aspects of anxiety will generally be more engaging to athletes than focusing on debilitative anxiety and failures to cope. A useful initial perspective is thinking in terms of assessing athletes' existing coping resources as balanced against the strength of their anxiety responses. What mental skills (or physical behaviors) do athletes already employ to cope with anxiety? How adaptive or maladaptive are these coping strategies? By staying attuned to clients, we can gain valuable information about their current cognitive and behavioral patterns and other relevant information (e.g., level of insight, willingness to talk openly, level of distress, motivation to develop coping skills). Encouraging client narratives or stories of particular circumstances where anxiety was prevalent is helpful in contextualizing issues and breaking down barriers to open and honest communication. Being patient in these early stages will often not suit the client who may generally want to move quickly into solutions, but a planned approach should set the conditions for a meaningful and ultimately successful working relationship. I have largely discussed practical considerations and process matters in working with sport anxiety. Planned approaches will normally involve a practitioner taking a theoretical perspective and consequently drawing on treatment objectives and techniques consistent with the chosen model. The practitioner who chooses to use rational–emotive behavior therapy will first need to be well versed in the micro psychology skills of REBT. Second, to draw maximum therapeutic potential, the therapist imbued with a particular psychological framework should ideally also appreciate the philosophical underpinnings, rather than solely concentrating on treatment modalities. That is, the

treatment chosen will be more powerful and authentic when the broader background of the underlying psychological framework is well understood. From an REBT perspective, being familiar with Ellis' classic contributions, other leading REBT practitioners and sport anxiety adaptations of REBT would represent a holistic philosophical-practical approach. I suspect that I am not alone in having occasionally taken the time-poor approach of lifting interventions without due consideration of broader philosophical considerations.

Without digressing into the relative merits of different approaches, the treatment of choice will depend on the athlete, the practitioner's knowledge and skills, and the circumstances. Whatever the treatment used, the likely outcome hinges on a range of factors, such as the micro-skills of the practitioner. I use the term micro-skills in this context to include the breadth and depth of specific knowledge, understanding, and experience in delivering planned anxiety management treatments. Breadth would likely include the range of approaches a practitioner can confidently use. Depth in this context relates to the proficiency of the practitioner in using the full range of tools generally associated with a particular approach. I mention micro-skills because sometimes there seems to be an assumption, especially with sport psychologist trainees, that employing a particular technique will somehow produce predictable results (rarely the case). If working on a contractual basis with a sports team, psycho-educational approaches to anxiety management can supplement individual work. Applied strategies, such as conducting interactive workshops or focus groups on anxiety will quickly demonstrate how the array of athlete-driven anxiety management strategies is virtually limitless. When one is

contracted to provide services to teams, opportunities are usually available to deliver targeted workshops to younger athletes or athletes particularly needing assistance managing anxiety. Embedding a guided interview with an experienced athlete into a workshop is usually well received by younger athletes, assists in terms of providing sport specific anxiety management strategies, and helps to normalize anxiety. One of the advantages of being a contracted sport psychologist is the opportunity to work closely with athletes in an ongoing manner and seeing athletes in pre-competition and competition modes where behavior can be readily observed. On the subject of pre-competition preparation, I highly recommend non-obtrusive regular observations of individual preparation routines. Attentively observing the symptoms of anxiety and associated behaviors helps in understanding athlete idiosyncrasies and establishing behavioral patterns and benchmarks. This approach fits well with optimal arousal theories such as individual zones of optimal functioning. Once typical anxiety patterns are established, behavioral departures from this normal pattern can be easily identified. Moreover, when substantial increases or decreases in anxiety are observed they can be placed in the context of the many factors that underpin such changes (e.g., specific opponents, game importance, quality of preparation, dispositional factors). Athletes are usually impressed when sport psychologists can later recall specific details of individual athlete competition preparations and signs of anxiety, especially when referenced with performance levels or other relevant factors. Practitioner–athlete conversations are thus likely to reflect the reality for the athletes, and planned management can be tailored to their specific needs and tendencies.

Anxiety remains one of the most intensely researched areas in sport psychology. Sport psychology as a field has moved well beyond the era of simple anxiety-performance theories and generic multi-modal therapies. The practitioner must do more than become familiar with the landmark research and have an appreciation for the many evidence based treatment approaches and interventions. Flexibility in adapting to the specific circumstances of each athlete who presents with anxiety-related stories, observing and reflecting on each case, and readiness to work through the many challenges that sport anxiety work entails are also essential. According to Conroy and Metzler, authors of Patterns of Self-Talk Associated with Different Forms of Competitive Anxiety there are not a lot of information that links self-talk and anxiety in sport performance. They decided to change this and studied 440 college-age men and women with the hopes of shedding some light on the possible linkage between anxieties and self-talk. The study looked at the relationship between defined patterns of self-talk and forms of performance anxiety. Self-talk could come in the form of wishing (pep-talk), fear, in failure or in success. The study found in general that self-talk is most used when the athlete is in competition and has anxiety and fear of failure. The most interesting thing this study brings to light is that the self-talk as a way of working through anxiety is most often used when an athlete has a fear of failure. Self-talk is used little in an athlete's fear of success. Oddly enough, this article did not explain the fear of success theory. One may question why a self-talk is needed if an athlete fear's success or even why an athlete would fear to succeed. The authors site many references to studies that emphasize positive self-talk as a way to reduce anxiety and enhance performance;

however, those studies failed to show a relationship between them. Meaning, that even though athletes, coaches and sport psychologists emphasize positive self-talk as a way to reduce anxiety and enhance performance, this doesn't mean there has been a lot of evidence put out there that supports this theory. So although positive self-talk is theorized to help an reduce an athlete's anxiety, there needs to be more studies to prove it. On the flip side cognitive (or known) theories say that self-talk is a major cause of anxiety. This type of self-talk is not a pep-talk so to speak; rather, they are considered the thoughts that automatically and involuntarily creep into the athlete's mind and cause self-doubt and fear. Considering that the self-talk or thoughts of doubt are automatic, the athlete believes them and no longer views themselves as confidant and in control. Since this anxiety overwhelms the athlete, it takes over the athlete's confidence and the athlete is distracted from rationally evaluating their performance. The athlete is consumed by the anxiety instead of being able to concentrate on their performance, this continues as a "vicious cycle where anxiety is a both a source of threats and a symptom of the emotional response to perceived threat." Trying to find a way to refocus those automatic thoughts into positive self-talk is the basis for cognitive and cognitive-behavioral studies of reducing performance anxiety. Self-talk can be defined as the way an athlete talks to his or herself due to a stressful situation in competition. For example, positive self-talk can be congratulatory self-statements or actions such as fist pumps. Negative self-talk could be self-defeating statements, or behaviors like ball or racket abuse acted out from frustration, or laughing in frustration. In this study the theoretically-based model Structural Analysis of Social Behavior (SASB) is used to describe self-talk.

One the horizontal axis, the way an athlete talked to him or herself was plotted from a range of hostile and attacking (on the left side of the model) to friendly and positive (on the right side). At the top of the model a continuum ranged from independent down to controlling at the bottom of the model. The model works like this, if an athlete has a positive self-statement such as "C'mon, you can do it" then her or she will score high on the SASB since this statement is friendly and independent. An instructional statement such as "reach a little higher, extend your arm" is a neutral statement (neither friendly nor hostile) but it is a controlling statement and will be ranked as such. A negative score would be given to a hostile statement such as "extend your arm you Idiot. The purpose of this study was to identify patterns of self-talk when used by an athlete while in performance. What was most commonly found was that regardless of whether an athlete was failing or succeeding, the patterns of self-talk were very similar; however, it varied in elevation. Meaning that an athlete may have positive self-talk, just as much as an athlete who has a lot of negative self-talk; however, only the negative self-talk is strongly related to failing. The athlete who engages in positive self-talk is weakly linked to having any fear of failure.

The findings of this article can be used in practice by coaches or athletes as further evidence that negative self-talk, whether by actions or emotions are brought on primarily by fear of failure. This research seems to back-up what one would consider being common sense. If an athlete is consumed by fear of failure, their confidence will in turn suffer and his or her performance will suffer. As an athlete or coach, the expectation would then seem to be to

practice and train to a point where the athlete would know he or she is performing at his or her top possible level. An understanding must be given to these athletes so that they know failure is part of the competition and fearing it will only hinder their best performance.

Chapter 6

Anxiety in Performance

Under pressure all sportsmen have increased levels of anxiety. However this can translate into improved performance or 'choking' dependent on the individuals' natural (trait) 'worry' level. The implications for football are many and varied but specifically for penalty shoot out situations this research suggest that selecting penalty takers based on an assessment of their trait anxiety levels may lead to improved performance. For individual players it suggests that if you have high trait anxiety (i.e. you're a natural worrier) then undertaking a tailored mental training program to cope with and learn to thrive on pressure is critical to improved match day performances.

The British Journal of Psychology recently published a study of the role of effort in influencing the effect of anxiety on performance[1]. The aim of the study was to test two conflicting theories and their predictions about the relationship between anxiety and performance looking specifically at whether increased effort had a positive or negative effect on performance. The two theories are CPH (conscious processing hypothesis) and PET (processing efficiency theory). They have fundamentally different views about the cause and effect relationship between anxiety and performance. CPH suggests that increased anxiety (e.g. before a match or during a penalty shootout) results in 'trying too hard' – in essence athletes start to try to

control things that they would typically do automatically/ naturally in practice – resulting in a breakdown of 'flow' and ultimately poor/worse performance than in practice. PET suggests that increased anxiety leads to an increase focus and effort ('coping'), which for some athletes results in an improved performance (and for others worse – depending on starting levels of trait anxiety).

The research used a golf putting task in experimental scenarios (with controls) to simulate anxiety through a known effective technique called 'ego-threatening' (in this case setting up a league table and offering a prize for participants). The study used a wide range of psychological tools to measure trait and state anxiety, self report, psycho-physiological and behavioral effort; and their effects on performance (as measured by distance from the hole).

The most important finding was that people with low trait anxiety (LTA) performed better under the competitive situation but people with high trait anxiety (HTA) performed worse. Both types of individuals had higher anxiety levels in the competitive situation and put in more mental effort, but in those with LTA this acted as a stimulus for a coping strategy whereas for those with HTA it acted as a distracter or caused some form of cognitive-physical breakdown. The study found support for PET and CPH but suggested that PET may be the more flexible (and useful) of the two for practical purposes.

Footballers experienced increased levels of anxiety before every match and during key situations (e.g. dead ball situations). An obviously intense anxiety point is the taking of a penalty – either during normal play or a penalty shoot-out. General psychological studies have shown that people

have different natural levels of anxiety (called trait anxiety); this specific research has shown that depending on one's level of trait anxiety the added pressure of competitive situations will likely result in better or worse performance depending on where we started from! So what can a footballer do if he or she has naturally high trait anxiety (i.e. "I worry a lot"). There are two main schools of thought at the moment in sports psychology. One suggest the use relaxation techniques such as self-talk and visualization before and during games. The other suggests training in a 'high anxiety' state to develop a resilience to match day pressures. Which works for you as an individual will depend very much on you as an individual so we suggest trying both approaches. What about coaches and managers? Well the key implication here is for coaches and managers to gain an understanding of which players are likely to respond positively to increased pressure and which not. For instance, by asking your sports psychologist to use the SAS test on all players and select penalty takers from the top quartile may be one strategy to consider. Similarly asking those players with HTA to undertake a more specific and tailored mental training program should improve results. In future research digests we will look at specific anxiety coping strategies and tools and their relative effectiveness.

Attention and Concentration

Concentration is part of the multi-dimensional construct of attention that Goldstein defined as "the process of concentrating on specific features of the environment, or on certain thoughts or activities" (p. 100). The main dimensions of attention are selectivity of perception, the ability to coordinate two or more actions at the same time, and concentration. These dimensions can be explained as follows.

Selective Attention

Selective attention is the perceptual skill of zooming in on relevant information while ignoring potential distractions. For example, goalkeepers in soccer must be able to focus on the flight of an incoming ball while disregarding the distracting movement of players in their penalty area.

Divided Attention

Divided attention is the mental time-sharing ability that enables skilled athletes to coordinate several simultaneous actions. For example, an expert basketball player can dribble the ball while simultaneously scanning the court for a teammate who is in a favorable position to receive a pass.

Concentration

Concentration involves the deliberate decision to invest mental effort in information that seems most important at any given time. For example, during a team talk before a crucial match, players will usually make an effort to focus carefully on their coach's instructions. For many psychologists, concentration is best understood as a mental spotlight that illuminates what we pay attention to either in the world around us or in the private theatre of our own thoughts and feelings. In some ways, it resembles the head-mounted torches that miners, divers, and spelunkers wear in dark environments. No matter where these explorers look, their targets are illuminated. This spotlight metaphor of concentration has two important practical implications. First, it shows us that although athletes' concentration can never be really lost (one's mental spotlight has to be shining

somewhere), it can be directed at the wrong target – one that is irrelevant to the task at hand. This Attentional misdirection happens regularly in everyday life. For example, have you ever had the experience of suddenly discovering that you've been reading the same sentence in a book or newspaper over and over again without comprehension because your mind was miles away? If so, then what has happened is that you have distracted yourself by allowing a thought, daydream, or feeling to become the target of your own mental spotlight. The second practical implication of the spotlight metaphor is that it suggests that athletes are in control of where they choose to "shine" their concentration beam at any given moment. For example, a midfield player in soccer who has gained possession of the ball must quickly scan the field before attempting a pass to a teammate. Here, he uses a broad external focus of attention. By contrast, a gymnast rehearsing a complex movement in her mind before a competition is using an internal focus of attention. Unfortunately, even the best athletes in the world sometimes allow their mental spotlights to wander. Let us now consider why this problem occurs.

Why Do Athletes Lose Their Concentration?

Athletes frequently complain of being distracted or losing their focus during competitive action. But, as I have just explained, attention is never lost just misplaced. So, what factors distract an athlete's spotlight from its intended target? In general, distractions fall into two main categories external and internal. External distractions are objective events and situations (such as crowd noise) that divert an athlete's attentional spotlight away from its intended target, whereas internal distractions include thoughts, feelings, and bodily

sensations (e.g., pain, fatigue) that impede a performer's efforts to concentrate on the job at hand. Regardless of where they come from, distractions are particularly damaging for elite athletes because of the automaticity of their skills. Because such athletes have largely automated their technical skills as a result of extensive practice (typically amounting to 6–8 hours a day over many years), they tend to have extra mental capacity available to devote to other concurrent tasks thereby increasing their distractibility.

Typical external distractions include such factors as spectator movements, sudden changes in ambient noise levels (e.g., the click of a camera), gamesmanship (e.g., "sledging" or verbal taunting of opponents) and unpredictable weather conditions (e.g., tennis players can get distracted if gusty conditions affect ball tosses). Usually, these distractions impair athletic performance. For example, Roger Federer's victory over Robin Söderling at the 2009 French Open tennis championship was jeopardized by the sudden appearance of a spectator who jumped onto the court and approached him. Clearly rattled by this distraction, Federer lost the next three points and admitted afterwards, "it definitely threw me out of my rhythm" (cited in Sarkar, 2009). Fortunately, he regained his composure and won the match. In soccer, noisy supporters can distract players. For example, fans of the Turkish football club, Galatasaray, are infamous for using flares, drums, smoke, and incessant shouting to intimidate visiting teams at their home ground, which is known to visitors as "Hell." Not surprisingly, some of the world's leading soccer teams (e.g., AC Milan, Barcelona, Manchester United, and Real Madrid) have been defeated in this hostile cauldron. Another example of the deliberate, tactical use of distractions comes from the verbal taunting

of opponents a practice that Steve Waugh, the former Australian cricket captain, justified as a means to achieve the "mental disintegration" of opponents.

They also include feelings of being tired or emotionally upset. A classic example of a costly internal distraction occurred in the case of the American golfer Doug Sanders who missed a putt of less than three feet that would have earned him victory at the 1970 British Open championship. This error not only prevented him from winning his first major tournament but also deprived him of millions of pounds in prize-money, appearance fees from subsequent tournament invitations, and advertising endorsements. Remarkably, Sanders' attentional lapse was precipitated by an internal distraction thinking too far ahead. "I made the mistake about thinking which section of the crowd I was going to bow to!" he confessed. By his own admission, Sanders had distracted himself by allowing his mental spotlight to shine into the future instead of on the task in hand. As he acknowledged: I had the victory speech prepared before the battle was over … I would give up every victory I had to have won that title. It's amazing how many different things to my normal routine I did on the 18th hole. Sanders' sudden anticipation of future success led to a costly lapse in attention. But dwelling on a previous success (or failure) can be equally damaging to an athlete's focus. For example, Stephen Hendry, the 7-times world champion snooker player, slipped up mentally after he had achieved a rare feat – scoring a maximum "break" in his match against Shaun Murphy in the 2009 World Snooker Championship. Having won £157,000 for this achievement, he said, "After I made the maximum, my concentration was nowhere … I was so elated … in the next break, I missed a red." Fatigue can also serve as an internal distraction. For

example, Paula Radcliffe, the British runner who has won the New York marathon three times, admitted that, "When you're tired, it's easy to drift off and suddenly have run 20 seconds slower for that mile, so you need to stay focused. I count to myself to break down the miles, and stay in the moment" unfortunately, few studies have been conducted on internal distractions in elite athletes, and we know relatively little about how and when they arise. Let us now consider the building blocks of effective concentration in sport.

Principles of Effective Concentration

Athletes Have to Decide to Concentrate — It Will Not Happen by Chance

To concentrate properly, athletes have to prepare to focus by making a deliberate decision to invest mental effort in their sporting performances. Many expert sport performers understand this link between deciding to concentrate and subsequently performing to their full potential. For example, Ronan O'Gara, the British and Irish Lions' rugby outside half stated, "I have to be focused. I have to do my mental preparation. I have to feel that I'm ready." Many athletes use mental imagery to distinguish between "switch on" (focused) and "switch off" (relaxed) zones in their sports. For example, when tennis players want to switch off for a few seconds during a match, they may look for towels from ball-persons behind the baseline of the court between points to dry themselves. But when they want to switch on their minds again, they step forward to begin their pre-service or pre-return routine.

Athletes Can Focus on Only One Thought at a Time

A second building block of effective concentration is the "one-thought principle" the idea that athletes can focus consciously on only one thought or action at a time. Given this limited attention span, the ideal thought for a performer should be a single word or phrase designed to trigger the appropriate feeling or tempo of the action to be executed (e.g., "slow and smooth" for a golf drive) rather than a complex technical instruction (e.g., "transfer your weight and turn your shoulders"). This one-thought principle is epitomized by the U.S. swimmer Michael Phelps, who revealed that, "You have to go one day at a time, one meet at a time, and one practice at a time. Everything is about steps and constantly improving on your own times and achievements."

Athletes' Minds are "Focused" When They are Doing What They are Thinking

A third principle of effective concentration is that when athletes' minds are truly focused there is no difference between what they are thinking about and what they are doing at that moment. This harmony between thought and action is characteristically evident in peak performance experiences in sport. For example, Roger Bannister experienced a unity of thought and action when he became the first athlete to run a sub 4-minute mile in May, 1954, "There was no pain, only a great unity of movement and aim." Based on these insights, it seems plausible that peak performance stems from a fusion of thinking and action. Such fusion is facilitated by concentrating on tasks that are specific, relevant, and under one's own control.

Athletes Need to Refocus Regularly to Keep Their Minds on Track

Because our concentration system is rather fragile, skilled performers have to learn to refocus regularly by switching their attention back to the present moment as often as possible. An example of such refocusing comes from Paula Radcliffe, the world-class British marathon runner, who uses a counting strategy to keep her mind on track during a race, "At marathon pace, if I count to 100 three times it's about a mile."

Athletes Should Focus Outwards When They Become Anxious

The final building block of effective concentration is the idea that when athletes become anxious, they should focus outwards on what they have to do – not inwards on self-doubts. This outward focus is necessary because nervousness tends to make people self-conscious or self-critical. The adoption of an external focus of attention is consistent with recommendations arising from Wulf's review of the research literature.

Practical Concentration Techniques

Sport psychology researchers have developed a variety of practical strategies that seem to improve concentration skills in athletes.

Specifying Action Goals

Psychologists commonly distinguish between outcome goals (e.g., the result of a match), performance goals (i.e.,

the specific end-products of performance that lie within the athlete's control such as attempting to achieve 90% serving accuracy in tennis), and process goals (i.e., specific behavioral actions that need to be undertaken to achieve a specific goal such as deliberately swinging slowly in golf). Using this distinction, sport psychologists suggest that focusing on actions (i.e., performance and process goals) can help to improve athletes' concentration skills.

Using Pre-Performance Routines

Most top-class athletes display characteristic and consistent sequences of preparatory actions before they perform key skills. For example, golfers tend to adopt the same set-up for every shot and waggle their clubs and take the same number of practice swings before striking the ball. These preferred action sequences or repetitive behaviors are called *pre performance routines* and they are designed to take the performer from thinking to action one step at a time. They are typically performed prior to the execution of self-paced skills (i.e., actions that are carried out largely at one's own speed and without interference from other people). Top athletes attach great importance to pre-performance routines in their quests to achieve optimal concentration before competition. For example, Martin Corry, the former England rugby player, stated: I believe that the only way to cope is to establish a routine, almost to go on automatic pilot. That way you are free to think about the game, rather than constantly fret about where you're supposed to be … I used to like switching the dressing room light off, to signify the end of our preparations and the start of something new. Singer (1988) described a useful five-step pre-performance routine

for self-paced skills. Applied to golf, this routine involves *readying* (preparing to perform by adopting a comfortable stance and taking a few practice swings), *imaging* (visualizing a target at which to aim), *focusing* (directing one's mental spotlight at a specific part of the golf ball such as its number), *executing* (swinging the club as smoothly as possible) and, if feasible, *evaluating* (or checking whether or not one is happy with the shot played). In competitive situations, routines are often combined with other concentration techniques. For example, the Irish rugby player Ronan O'Gara incorporated the use of mental imagery and trigger words into his routine before kicking the winning penalty for Munster in the 2006 final of the Heineken Cup against Biarritz: It was obvious how important it was, but I just had to get into my routine and block everything else out. Usually, there's a mark in the centre of the crossbar and I focus on that. Thomond Park has a black dot, at Lansdowne Road its green. I imagine a little hoop between the sticks, like a gymnasium hoop, and I picture the ball going through that. I stepped back and the buzz words in my mind were, "Stay tall and follow through.

Using "Trigger Words" as Cues to Concentrate

Many athletes talk to themselves covertly when they compete, in an effort to motivate themselves or to keep their minds on track. Such silent cognitive activity has attracted research interest from psychologists in recent years. Usually, what athletes say to themselves silently takes the form of praise (e.g., "Well done! That's good"), criticism ("You idiot – that's a stupid mistake"), or instruction ("Swing slowly"). It is this third application of self-talk that interests us here in our discussion of athletes' use of trigger words. For

example, the U.S. tennis champion Serena Williams used trigger words during the 2002 Wimbledon ladies' singles tennis final against her sister, Venus. In this match, Serena (who defeated Venus 7–6, 6–3) was observed by millions of viewers reading something as she sat down during the changeovers between games. Afterwards, she explained that she had been consulting notes that she had written to herself as trigger words or instructional cues to remind her to "hit in front" or "stay low." Serena Williams also used trigger phrases such as "get low," "add spin," or "move up" during her defeat of Daniela Hantchukova in Wimbledon 2007. They encouraged participants to use verbal cues such as "ball" or "target" in an effort to concentrate on the most important elements of the execution of an open skill (e.g., water polo ball throwing). They found that this use of self-talk not only improved skilled performance in water-polo but also decreased the prevalence of intrusive thoughts among the players concerned.

Imagery

Earlier, I mentioned that some athletes use their imaginations to create switch on and switch off zones. More generally, imaging involves "seeing" and "feeling" a skill in one's mind's eye before actually executing it. Although there is considerable empirical evidence that mental practice facilitates skill-learning and performance, its status as a concentration technique remains uncertain. Anecdotally, however, mental imagery is used widely by performers for focusing optimally. For example, the English rugby star, Jonny Wilkinson, revealed that his imagery involves a sort of clarified daydream with snippets of the atmosphere from

past matches included to enhance the sense of reality. It lasts about twenty minutes and by the end of it I feel I know what is coming. The game will throw up many different scenarios but I am as prepared in my own head for them as I can be. If you have realistically imagined situations, you feel better prepared and less fearful of the unexpected. In Wilkinson's quote, we discover that mental imagery may help athletes prepare for various hypothetical scenarios, thereby ensuring that they will not be distracted or upset by unexpected events. This hypothesis, however, has not been tested adequately to date. Additional research is required on athletes' knowledge about, and views on, imagery techniques in sport.

Concentration, or the ability to focus on the task at hand while ignoring distractions, is central to successful performance in sport. It is part of the construct of "attention" that is concerned with focusing mental effort on sensory or cognitive events. Other dimensions of this construct include selective attention (the perceptual skill of zooming in on relevant information while ignoring distractions) and divided attention (the mental time-sharing ability that enables us to perform several simultaneous actions equally well). For cognitive attention to either in the world around us or in the private theatre of our own thoughts and feelings. An important aspect of this spotlight metaphor is the idea that concentration can never be lost but can be directed at the wrong targets (i.e., things that are irrelevant to the task at hand). Research-based principles of effective concentration include the ideas that one has to *decide* to concentrate in the first place, one can focus on only one thing at a time, one should try to do exactly what one thinks, one needs to refocus regularly, and one should focus outwards when

anxious. Practical concentration techniques include setting action goals, establishing pre-performance routines, using trigger words, and visualizing future actions. Overall, this chapter has shown that far from being something fleeting or mysterious, concentration is a mental skill like any other that can be improved with appropriate training and practice.

Chapter 7

Confidence in Sport

A thletes know two things about confidence. One, confidence makes them feel bulletproof. When they believe in themselves that they have the resources and abilities to perform successfully their performances flow automatically and easily. Two, athletes also know that confidence is fragile. Certain circumstances, such as failure in a critical competitive moment, can lead to chinks in athletes' bulletproof armors, or even a total collapse of confidence and an inability to successfully perform a skill in competition. Elite athletes have stated that the most important ingredient in mental toughness is a deeply rooted self-confidence that is strong and resilient in the face of setbacks and obstacles. Because confidence is foundational, but sometimes fragile, athletes and coaches often identify it as an important mental skill to be nurtured and maintained. Research suggests that confidence may be enhanced through various types of mental training. So what strategies can be used to help athletes gain and maintain confidence? How can we individually use and collectively package the tools in the mental training "toolbox" described in this section of the book to build confidence? And how can we, or even can we, help athletes develop the deep, resilient confidence identified as a key to mental toughness or feelings of "bulletproofness?"

How Confidence is Built

How do athletes build confidence? They (a) physically train and prepare exhaustively, (b) engage in self-regulatory strategies (e.g., self-talk, imagery, energy management, behavior monitoring) to habituate productive responses in competition, (c) gain inspiration and support from others (e.g., teammates, family, coaches), and (d) progressively achieve success and gain experience in succeeding in diverse situations. Or, a more colorful way to describe it is to say that athletes gain confidence through: perspiration (hard work), regulation (mental training), inspiration (socially from others), and validation (seeing their hard work and preparation pay off in successful performance). Athletes' self-confidence is nested within a complex range of social contexts, so it is important to account for all these types of confidences. Athletes' self-confidence is embedded within increasingly broader social layers, such as confidence in their abilities to succeed in their roles and within their specific cohorts (e.g., line in hockey, doubles partner in tennis) as well as confidence in their coaches, teams, and organizations. An abusive coach, team conflict that negatively affects performance, and/or a dysfunctional athletic department or organization can all serve to undermine an athlete's confidence or sabotage attempts to build self-confidence. The direct pathway to building confidence is using the four sources of confidence to create and enhance strong, resilient beliefs about one's abilities (lower long arrow). These strong and resilient beliefs about abilities create feelings of confidence, which enable athletes to engage in successful performance execution. This pathway is best thought of as building confidence for performance success. The indirect pathway to increasing confidence is to build one's physical and

mental skills (upper long arrow) that lead to effective energy management, productive thinking, and optimal focus. These qualities are controllable mental skills that guide optimal performance execution, which then enhances confidence. The premise is that even if athletes' belief systems (feelings/ thoughts about abilities and probability for success) are less than optimal (as when one lacks confidence), they can use their physical and mental training to focus on relevant cues, manage energy, and think productively to successfully perform. Successful performance execution then builds confidence, which then enhances performance, and so on. This pathway is best thought of as building performance success for confidence. This indirect pathway is important because confidence is a difficult skill to mend once it has been shaken by failure or poor performance, because one main source of confidence is performance success. Through systematic physical and mental training, athletes can develop an automatic performance response that will allow them to succeed, even when their confidence is shaky. This application of mental skills to enhance performance at a time of shaky confidence is aptly described by Peter Vidmar, U.S. Olympic gold medalist in gymnastics: I was petrified because I missed my first two routines. I was starting to panic thinking. I might not make the Olympic team, even though I was still in third place. All of a sudden, I just calmed down and started thinking straight. Just as I started thinking, things started to click for me. It turned out to be the best routine of my life up to that point. I don't have that type of panic anymore. As the years went on, I got rid of that element of panic because I triggered myself somehow into saying, "Okay, something is wrong now. What can I do about it?" as opposed to saying, "Something's wrong. I can't believe its happening.

Building Confidence Through "Perspiration"

Confidence is earned through persistent, deliberate practice and training (or "perspiration"). There are no shortcuts or quick fixes when it comes to confidence. Systematic physical preparation allows athletes to trust themselves in executing their skills during the pressure of competition. Here are some specific ways to build confidence through perspiration:

1. Incorporate training strategies that simulate pressure situations and create unexpected scenarios to train adaptability. Practice against a six-player defense in basketball; use multiple balls and rapid-fire sequencing in volleyball defensive drills; turn the heat up (literally!); systematically practice last-minute plays and strategies, and use the scoreboard to create specific situations for athletes (e.g., down by six points with a minute left, up by two points with a minute left). Some coaches are masters at these tactics, with the intent being that competition will rarely be more intense than the training.

2. Set up a team or programmatic mantra or attitude that defines the work ethic of the team and how they can "live" this work ethic. Work with team leaders to create the "how we do it here" norm for training intensity and practice expectations. One example mantra is "I see me." A team with whom we worked bought into the idea that "details make champions," and then they committed to that by emphasizing the importance of everyone taking personal responsibility for the details of becoming champions. "I see me" meant that no one had to be watching or evaluating for each player to take care of the smallest details in training and preparation. The phrase was extended as players would say "I see you, Robin" to

acknowledge and show appreciation for a teammate's hard work or extra effort.

3. Teach athletes to focus on performing at their best level "that day." Perspiration is particularly needed by athletes on those days when things don't come easy for them. Confidence affects our effort and persistence, without us even realizing it. Athletes must understand how important it is for them to focus and "grind" out their best performances when they aren't "in the zone" or when they are not feeling naturally confident. Challenge them to focus on performing at their best for that day. If they feel like they're not at 100%, focus on the 80% that they have. This situation is an important mental test for athletes. Great athletes don't wait until they feel like performing great; they attempt to perform great even when they don't feel like it. An important part of athletes' confidence is their beliefs in their abilities to perform well on "off" days.

4. Ask athletes to assess their preparation and commitment to training. In a team meeting, ask athletes to grade (from 0 to 100%) their team's commitment to physical conditioning, physical skill execution, and mental skill development. Then post all the team members' scores on a chalkboard for all to see. Lead a discussion about the various grades assigned to each category. Then, in small groups followed by a collective team discussion, have athletes generate ideas about how to raise the team's grade in each category. Another exercise to assess athletes' effort in training is asking them to consider their training efforts compared to key competitors:

1. Who is your toughest competitor, the person you most enjoy outperforming?

2. On a scale of 1 to 10, rate how much effort you think this person puts into training. (1 = *very little effort*, 10 = *as much effort as possible*)

3. On the same scale, rate how much effort you put into training.

4. If your number is less than 10, what changes would need to be made for you to put a 10-level effort into your training? Be specific, and describe what a 10 would look like for you in your training.

Building Confidence Through Regulation

Perspiration is the first step in building confidence, so that athletes have foundations to be confident. Just like the endless physical training repetitions that athletes undergo to hone their physical skill execution, they must also undergo deliberate mental repetitions to systematically train productive responses to competitive demands. This psychological training could include many of the mental strategies presented in this book, including self-talk training, imagery, energy management, and the development and use of focus plans. Below are a few specific tips about how to "package" various self-regulatory skills to enhance confidence.

1. Fake it 'til you make it. Athletes should attempt to exude a physical or behavioral level of confidence as much as they can. Athletes will benefit from controlling their body language, facial expressions, and posture so that they convey a sense of confidence and personal control. This faking it until you make it should be explained,

practiced, and monitored in training sessions, because physical poise and behavioral confidence are an essential part of a team culture or program "code." Responding with outer poise or confidence makes it easier to respond with inner confidence, or to believe in self. Although faking it 'til you make it refers to an outward appearance of confidence, it also can apply to internal beliefs. Athletes should adopt a key affirmation that describes their idealized self-image, or what they want to be. Affirmation statements should always be stated in the present tense to project to themselves that they are what they intend to be. Affirmations should also be simple, active, emotive, and positive. Examples are: "I'm a relentless scorer," "I love the pressure because it draws out my best," and "I'm prepared, strong, and focused." Affirmations work if athletes believe in themselves enough to program thoughts toward their desired goals and achievements.

2. Learn to "respond" with confidence. We believe that athletes should focus on responding with confidence and control, as opposed to reacting with emotion or unproductive behaviors. Practice is needed because competitive sport involves failures, mistakes, inequity, criticism, embarrassment, aggression, and opponents whose goal is to block athletes from achieving their goals. Athletes should develop thoughtful, planned responses to situations that jolt their confidence or distract their focus. These situations include such things as receiving criticism from coaches, making performance errors, suffering a heartbreaking defeat, dealing with rough play, and taking bad luck in stride (such as a poor call from an official or a freak, lucky

play from an opponent). Effective self-regulation means that athletes are mentally efficient and emotionally adaptive, no matter what occurs in competition. How can athletes learn to respond with confidence? By practicing it in training and through imagery technique. We suggest using "I respond with confidence" as a go-to phrase that athletes learn to repeat when training their response-ability. Everyone has the ability to respond more effectively: it just takes a commitment to change and practice in making the new response automatic. Below is an example of a response plan that athletes could develop and practice for those moments when they lose focus, make a critical error, or feel as if they are "choking." The acronym ACT gives athletes three steps to follow in responding with confidence: Accept, Center, And Think. Accept the dreadful feelings, and tell yourself that it's okay; you understand what's happening and expected that you could feel this way. Don't try to suppress or hide the bad feelings acknowledge them. Own them, or they will own you. Center yourself physically. Create a confident posture; inhale deeply, thinking about infusing your body with feelings that you need (e.g., strength, readiness, relaxation), and then exhale the tension, negative thoughts, and bad feelings. Think intentionally by directing your thoughts to your "go-to" self-talk strategy, such as the, "I respond with confidence" statement to center yourself, followed by a performance-oriented go-to thought that focuses on controllable things and the process of performance. Continuously occupy your mind by thinking on purpose, instead of letting your thoughts wander in unproductive ways. Athletes should ACT, not just fall victim to random

thoughts and feelings that enter their minds. Athletes can successfully ACT if they have planned productive mental responses to specific situations that undermine their confidence and focus, and then mentally practice these responses over time to make them habitual

3. When responding effectively to adversity, athletes self-regulate their performances to "stay within themselves." An ineffective response to mistakes, poor team performance, or other obstacles is to try too hard or to attempt to make up a mistake with an exceptional play. But by trying to take it up a notch or do something spectacular, athletes forego the disciplined, trained performance responses that lead to success. Tell athletes: what happens to you is not nearly as important as how you respond to what happens to you. After a triple-bogey, golfers should program their focus to respond with a solid tee shot on the next hole (as opposed to ripping a career shot). A struggling volleyball hitter should attack aggressively to attempt to put the ball down, but not spectacularly in attempting an unbelievable shot. Attempting to do something great, in responding to mistakes, often leads to more mistakes. Help athletes understand how to make the solid play as a confident response.

4. Create and re-create personal images of successful experiences. Athletes should "see" what they want to happen (successful performance) and replay past successes. Many athletes today have personal highlight videos of themselves to view, a motivational and confidence-building technique. In addition to using technology in this way, athletes should create their own

mental personal highlight videos using creative imagery. Athletes can create whatever highlight video they want, but a good formula to follow is to make about a minute or two highlight of a previous peak performance or combination of highlights from the past (see Selk, 2009). Then immediately follow that up by creating images of how they will feel, think, and perform in an upcoming competition. Athletes should outline on paper the key images that will make up both parts of their imagery highlight videos. This method makes their mental approach systematic as they experiment with images to find the ones that work best for them.

Building Confidence Through Inspiration

Systematic physical and mental training helps athletes gain confidence through perspiration and regulation, and is the most direct method to build confidence. We also know that athletes thrive when they perform within a "culture" of confidence. Such a culture involves supportive and trusted interpersonal relationships between athletes, teammates, and coaches. Team building and communication activities may enhance not only team cohesion, but also team and athlete confidence. Consultants and coaches should choose teambuilding activities that focus on trust and personal self-disclosure, understanding and embracing diversity, and creating a collective sense of team identity. The leadership and decision-making of coaches has also been shown to be an important source of confidence for athletes, and coaches should be sensitive to the needs of the team and individual athletes in terms of confidence. Frequent, yet short and concise team meetings to consistently reinforce productive interpersonal patterns might be helpful. For example, 5

minutes at the end of training sessions could be scheduled for team members to give feedback and evaluate the quality of the workout as well as the team's progress. Questions might include: What went well? What needs work? How can coaches help you? How can teammates help you? Confidence in teams is also enhanced by having strong athlete leaders. Coaches and sport psychology consultants should initiate team discussions around leadership to specifically identify what it means to be a leader for this group and what the team needs in terms of leadership.

Building Confidence Through Validation

The strongest source of confidence is success. The biggest reason that athletes lose and lack confidence is that they allow others to define success for them. Each athlete can develop a personalized goal map that identifies specific and individualized mastery and performance goals, as well as time-bound goal achievement strategies. Athletes who buy into their personal goal maps gain control over their own success, which is central to building confidence. Coaches should reinforce progress and achievement for each individual athlete based on their personal goal maps. Particularly in relation to self-confidence, athletes need help in identifying and pursuing challenging yet achievable goals. Athletes should be encouraged to push their limits and extend their performance and skills, but not at ridiculously unrealistic levels and definitely not as defined by others. Stable, resilient confidence is based on the pursuit and achievement of goals within personalized goal maps.

A Case Example: The Line is Mine

Here we present a case example of a basketball player in a crisis of confidence. Multiple strategies were used to rebuild this athlete's confidence, including physical and mental training to integrate perspiration and regulation within an inspirational climate to achieve personal validation and performance success.

Description

Kyra was the starting point guard for her college team. In a key game in early December against a highly ranked opponent, she missed two free throws in the closing seconds, which could have won the game for her team. Immediately after that game, Kyra's confidence at the free-throw line plummeted and her shooting percentage dropped from a heady 87% to a dismal 50%. Kyra's coach told her to, "Relax and don't worry about it," but Kyra continued to struggle at the line. In a holiday tournament, the coach had to substitute another player for Kyra late in the game to ensure that she had a ball handler on the floor who could make critical free throws down the stretch. Kyra understood the decision, continued to practice more and more free throws, but she still could not regain her confidence and free-throw shooting percentage.

Assessment

Kyra had fixated on the key free throws she had missed at a critical time. Her images and self-talk had become negative and less controllable than before, and her attentional focus at the line turned inward as she was paralyzed into controlled

processing (thinking about how to shoot) as opposed to allowing her shot to flow freely through automatic processing. She lost her belief in herself to make free throws, particularly in critical situations.

Intervention

When the team had a week off for final exams, with a 2-week break between games, Kyra met with a sport psychology consultant. She stated that she wanted to "regain her confidence" in her free throw shooting, that she "knew she was still a good shooter," but that "she didn't believe she could transfer being a good shooter into putting the ball in the basket at this point." The consultant clarified that Kyra meant that she knew her solid shooting was still in there, but she had too much mental interference to "let it happen" naturally as it had in the past. Kyra and the consultant agreed to combine a progressive physical training strategy with a mental training strategy designed to "clear" her mental interference. Basically, the intervention was to "rearrange" Kyra's focus, self-talk, and personal images. Because Kyra lost confidence in her free-throw shot, she agreed to change her pre-shot routine (somewhat radical for a college basketball player in the middle of a season) to wipe away the negative memory and triggers that reminded her of the missed free throws. She described it as wanting to leave the old free-throw "problem" behind by changing her routine, and liked the concept of a fresh start. To create this new routine, Kyra engaged in a centering exercise where she carefully considered how she wanted to feel physically as well as what she wanted to think about when she got to the free-throw line. She decided to engage the feeling of being strong in her legs and balanced at the line. She would take her stance

carefully and flex her knees a few times to cue the strong and balanced feeling. Her attentional focus was a smooth uncoiling of her body and the ball floating softly over the front of the rim. Her self-talk mantra was "strong, smooth, soft," which verbally and visually led her through the steps of her routine. She noticed that her new routine at the line was working, but she still felt out of control at the initial moment when she was fouled and realized she was going to the line. She said she would have a quick "Oh, no!" moment where she felt fear about going to the line. Through discussion, the first thing Kyra came to realize and accept was that fear is okay and normal in that situation. She learned a response plan for the moment she was fouled, in which she could acknowledge her fear but also her confidence that she "had the shot." She chose to focus her attention immediately on how prepared she was to shoot the free throw by repeating to herself, "The line is mine; the line is mine strong, smooth, soft." "The line is mine" created a strong overall feeling of confidence, and the words "strong, smooth, soft" locked her mind on her specific pre-shot routine and the needed focus for the shot. She worked on physically portraying confidence in her posture, walking to the line, and visually rehearsing the thoughts, feelings, and posture in which she would engage prior to shooting. Once her routine was created, she began practicing it in sets of 10 repetitions at 5 feet, 10 feet, and then 15 feet (the free-throw line) in front of the basket. This tactic gave her a progression to follow, with the intent of practicing the routine enough to make it automatic and useful. And prior to physically practicing at each station, she mentally practiced her new routine and shooting the 10 reps at each spot. As time progressed in training sessions with the team, the coaches eased Kyra back into pressure situations

by having her shoot free throws with consequences (e.g., taking a "time out" and going through mental rehearsal again) if she missed. This tactic allowed her to practice her new routine in simulated competitive situations.

Outcome

Kyra really liked creating a new routine and leaving her problem behind her, and the fresh start and mental plan coupled with systematic physical practice allowed her to overcome her "choking" response at the line. In time, Kyra learned to trust her preparation and follow her mental plan, and was able to do so because she spent extra time physically practicing her free throws within the new routine. She described the experience as "breaking through the barrier" that kept her true shot from coming out at the line. Her confidence was mended through mental training to manage her thinking in such a way as to perform better, which then built back her confidence.

The overall goal for athletes is not a quick fix of confidence here and there to keep them going. Strong and resilient confidence is based on a challenging physical training foundation, practiced self-regulatory skills, strong leadership and a supportive team/organizational culture, and success that is personally validating of one's abilities and achievements. But athletes must accept that confidence is not a shatterproof shield or magical state. What is important is that athletes believe that they have multiple ways to gain or restore confidence and their performance abilities. Any coach or player will tell you that one of the most important elements in successful sport performance is the level of *self-confidence*. Vealey an expert in sports psychology describes

confidence, as "the belief or degree of certainty individuals possess about their ability to be successful in sport". When players are confident they can perform at their best level and it is rare for successful players to have a persistent lack of confidence. Fig 1 below shows various factors both in and out of sport that may affect confidence levels.
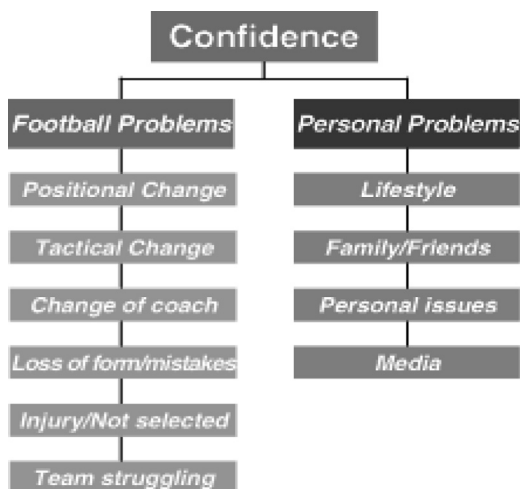
Fig 1: Factors that can affect confidence

Developing a good general state of confidence is vital for withstanding and recovering from setbacks such as a defeat or a poor performance. There are many characteristics that reflect a player's confidence and this can be observed during training and games through body language and verbal comments. The following is based on Beswick's (psychologist in English professional sport) work in top level sport and lists the messages sent out by players who are high in confidence:

– High self-belief - a real "I can do it" attitude

– projecting a positive image through good body language

- enjoying and having fun in competition and training

- not unduly worried about losing or consequences

- calm, collected, concentrated, and high self-control

- don't feel the need to impress others

- accept them for the way they are whilst understanding their strengths and weaknesses

These characteristics may be attained through good coaching and management of players and are essential for attaining success in sport.

Ways of Building Confidence

There are several methods to build up confidence in your players and team. One of the most influential sources of confidence is often past performance - success breeds confidence and vice versa. Thus what we might call a *positive confidence cycle* can be developed and this is highly linked to the technique of "goal setting". This technique involves planning and setting goals in training for a player to achieve. These can be short, medium or long term, must be challenging but obtainable. For example, too difficult goals will result in players becoming frustrated. Coaches should try to make training both fun and enjoyable. They should also reward good performance with compliments and when failure occurs use praise/criticism techniques to advise the players, e.g. after a poor shot: Praise the player: "Good power in the shot..."Criticise the player: "But I think you can improve the..." Praise the player: "I know you can do it..." Verbal encouragement and treating players with equal respect can play an important part in attaining the right level of confidence, especially coming from experienced and

respected coaches. Players can also encourage themselves through positive self-talk remember Mohammed Ali's "I am the Greatest!" Transforming thoughts such as "What if I miss the shot" into "I will get the next one in" or "I don't think I am good enough" into "The coaches must think so and trust me as they picked me" will help remove inner doubt. Channelling the nervous energy produced from the stress-response into positive thoughts can provide another source of confidence. Feeling your heartbeat strongly can be thought as "I am up for this" rather than "I am scared". Players must also place total trust in their personal skills (as well as in others) to win and be able to screen out distractions. Another means of building up confidence is the observation and imitation of successful players. Coaches may want to organise demonstrations, videos and practices based on what players have seen. However, care must be taken to ensure that players feel they cannot match that player for skill or become frustrated through failure. Also, Mental Imagery may be employed as a means of mentally rehearsing correct technique. The old saying *practice makes perfect* is also important as a correctly prepared player will start a match knowing they are at the peak of their form and are ready for all situations that may occur. It is important as well that players who lose confidence do not concentrate too much on the one area of their game where they are struggling and hide the other areas where they are doing well. A good example is a centre forward who is missing chances, concentrating on all the aspects of his game such as build-up play and creating chances for others can avoid over-emphasising the one big problem and allow the player to see their overall importance to the team. Beswick calls this seeing the *Big Picture*. Finally, a player's personal lifestyle will

affect their self-confidence. Parents of younger players must never let their egos and dreams get the better of themselves. Children need love, support and understanding whether they win or lose. It is essential for players to have someone in their life to share their feelings with and who can also help guide and provide encouragement.

Both the coach and player have an important role to play in building confidence. Players must always look at the positive side of things, be correctly prepared, committed, see situations as challenges not problems and trust themselves. Making sure of a correct lifestyle will also help maintain confidence. A coach can heavily influence player confidence through a positive philosophy as well as providing demanding yet attainable goals in training and competition. A coach must through correct praise and criticism encourage players to better themselves and to concentrate on every part of their game.

Master Key to "Enter the Zone" Everyday

The zone is an experience players get when everything they do seems effortless. They allow themselves to be an athlete and allow their subconscious mind to go on "auto pilot". The athlete is not thinking, "What could go wrong, who's in the crowd, or will I get pulled from the game?" Instead they are, "in the game." When people are in the zone the game goes by quickly. They play so well that they may forget what happens. This is because the experience was almost unreal. The best athletes do this most often. They trust in their abilities and let things flow. If the athlete has to think too much about what they are doing, the athlete cannot naturally react and respond and the zone cannot be achieved.

Key #1 − Physiology

Physiology is how you use your body. How you breathe. How you move. How you warm up. Chemicals are released by the brain that is directly related to how you use your body. Your body position, how you breathe, will dictate the types of chemical your brain releases. This is important because when people are confident they have almost a certain walk or swagger. The shoulders are back; the head is up, with deep breathing. Taking this example and concept we can then ask a sport player, "How do you feel when you are playing your best, what does it feel like in your body?"

So, in preparation to enter the zone the athlete must access those movements and positions, so that when they move in this way they start firing off signals to their brain, saying, "hey, today's the day and I'm going to perform as I did when I was in the zone." The way an athlete moves will, in may respects, dictate whether or not an athlete plays or practices well.

Physiology and how you move is something that is beyond just game day. The athlete should feel confident all the time. When the player thinks about an upcoming game, they put themselves in a certain physiology. A player is asked, "think of a team that you know you can beat." The player will have their shoulders back, their head nodding saying, "I know we can beat them!"

Then the player is asked, "think of the team that's number one in your conference." Their physiology will change. They may become nervous and show signs of anxiety. Their breathing may change. Become shallower and more rapid. The situation can be altered if the athlete has the confidence

to know that they, the opponent, may be good, but we are going to find a way to beat them. This strategy can be used the week of the game.

I remember watching the end of a kick off. Both teams scored 4 goals. So it came down to the last two guys. One went up confidently, and put his ball in the back of the net rather easily. The next guy walked up, head down, and physically looking like he had already lost. To make a long story, short, his attempt went wide left, not even close to being a goal. One thing to note is that his physiology, then affected his thinking, and his internal images, which affected his performance.

Key #2 – Positive Self-Talk

So, as you can see, these three keys are all interrelated. When the athlete places himself or herself in a negative physiology, the self-talk is usually negative. The statement may be, "I hope we can win, we'll try and win today." Or they may ask, "Do you think I can cover my man? He/she is pretty fast!" Or, "I hope I don't blow the game for us today." The words hope and try are all negative suggestions to the mind because they bring up doubt and bring up things that the athlete doesn't want to happen.

The key is to replace the words "hope" and "try" with "know" and "will". The player should say, "I know I'll beat my man today." A goalie may say, "I am shutting down this team today!" "My defence is solid and I anticipate everything!" A midfielder can say, "I have great control of the ball, and am controlling the game today." Even though mistakes will occur, believe in what you can do by giving your body and

mind these suggestions, allowing your body to respond the way you want rather than in a negative way.

In developing self-talk the player must realize that they talk to themselves. Most players don't. The average player has 50 to 60 thousand thoughts a day. Research says that 90 percent of those occur the day before. If you do the same thing day after day, those thoughts don't change. If they are negative, those thoughts will continue the entire life of the person.

To change your thoughts, the first thing is to be aware of their inner dialogue. Notice the difference between when the person is happy and feeling good and what they say to themselves. The player should think about it. With the same concept the player should be asked "What do you say to yourself when you make a mistake?"

There will be major differences between the two. They need to be taught that when they start to say a negative phrase they should stop and say, "that's not true" and finish with a positive suggestion. An example would be when a defender lets the other team get behind him or her and they score. Something might come into the defenders head may be, "man I am terrible." Or "I always cost us the game!" The defender needs to be taught to say, "forget it, I'm turning this game around right now." "I always bounce back stronger after making a mistake." The next thing the defender needs to immediately do is change their body position (physiology). This is how the two work together.

Another thing that can be done is to write affirmations. Phrases that allow the player to start programming their mind and create a focus. Simple things like, "I'm a great consistent striker, and I'm confident, positive and a team

player." These phrases can be put on a 3×5 card and put in a notebook, or placed in their room where they see it and repeat it day after day. It should be related to what they think about themselves and what they want to become.

Key #3 – *Visualization*

This is the aspect of zone training that most people are familiar with. Everyone visualizes. Some people may not be aware of it. Visualization is the best way to pre-program for success in actions in future events. The best time to visualize is right before going to sleep. This is the time to play the scenario that the athlete wants to have happen in the game. It may include what the opponent will do in trying to win. The athlete thinks of how they and their teammates should respond positively to the challenges of the games. If visualization is done prior to the game it should be done well before the game because when you put yourself into what is known as alpha state (necessary for visualization), the body becomes very relaxed. This in itself is good, but not if the athlete is not used to it before competition. This is an individual thing that players must be aware of. Another good time to visualize is upon waking up in the morning. This is the fastest way of changing any behaviour and learning new strategies. An example is a player working on beating their man off the ball, and scoring. The player should watch the play go through their mind starting with 10 times, and keep repeating it until the skill is mastered. Another situation is prior to the game and the images that a player might have, whether they are a negative or positive outcome. If the player is not confident about the chance of winning the game this puts the player in a negative physiological state which will creates negative self talk which creates a negative outlook

on the images of the game. This creates a cycle of negative feelings, and until you change either the self-talk, images or the physiology, the player's performance will suffer and the opportunity of entering the zone will be lost. An additional negative factor is that the player will take the rest of the team down with them, depending on their leadership role. The good news is that if you change one factor, you change them all. A great place to start is self-talk. The player may feel that they are going to have a tough time, but if the player says, "no way, we have the best staff and toughest strikers in the league, we can find a way to pull this out!" this changes everything. This is the breakthrough that coaches should look for.

Getting Ready for Practice

Following is an example of the mental preparation of a captain of a team prior to practice during the season leading up to important games to determine the league or national championships. When you wake up in the morning, after first visualizing an important task to achieve at practice, change the physiology.

Stretch, put the shoulders back and get the kinks out of the body and say, "today's going to be a great day, something big is going to happen and I'm the one who will make it happen." This creates a positive outlook on the day. As the day goes on one of the critical things the leader of the team should do is think about how they show up in class or social environments around their teammates. This is the time to be walking with a confident strut and not walking around lazy. Some athletes maintain an ongoing internal dialogue while competing: "I really need this putt," or "I couldn't hit

the side of a barn today," or "I own this court." Other athletes shout aloud in frustration or exhilaration. "You cannot be serious!!" or "Come on!! Get there!" And then there are times when athletes compete in silence, step up, take a deep breath, and execute. What mindset should athletes have to perform their best? Does thinking or talking to oneself affect sport performance? According to Confucius, "the more man meditates upon good thoughts; the better will be his world and the world at large." Many athletes and coaches believe that being positive enhances sport performance. But is being positive always right? James Hagerty once said, "One day I sat thinking, almost in despair; a hand fell on my shoulder and a voice said reassuringly: cheer up, things could get worse. So I cheered up and, sure enough, things got worse." If positive thoughts are not always effective and sometimes things get worse, then perhaps negative self-talk, a mental kick in the butt, could be an alternative performance strategy. And what about the athletes who are "in the zone" or performance flow states and don't seem to be thinking or talking to themselves at all? These questions pertain to self-talk and the relationships among self-talk, personal factors, environmental factors, and sport performance. In this chapter, I will define self-talk, present research related to self-talk in sport settings, and finally, discuss how to apply research findings to work with teams and athletes. Understanding self-talk can help athletes, coaches, and sport psychology consultants meet their sport, exercise, and other goals.

What is Self-Talk?

Self-talk is a term used widely in the research literature to describe what athletes say to themselves out loud or

internally and privately. A number of terms have been used to describe self-talk, including inner or internal dialogue, monologue, voice or speech, auditory imagery, private speech, self-statements, stream of consciousness, and more. Given this broad range of descriptive terms, it is not surprising that definition of self talk range greatly in breadth and scope. Some definitions of self-talk focus only on self-directed verbalizations; other definitions include imagery, inner or internal speech, hand and body gestures, and even some verbalizations that appear to be directed at others. The inclusion of gestures in definitions of self-talk seems to be warranted, based on recent cross-cultural research indicating that gestures are intimately tied to language acquisition and use.

Consideration of self-talk definitions may seem to be solely an academic exercise but there are applied benefits. Defining self-talk facilitates clarification and a shared understanding of the construct. Broad definitions of self-talk suggest that a range of strategies might be used in self-talk interventions.

Types of Self-Talk

To help understand self-talk more clearly, researchers have classified self-talk according to a number of coding schemes. For example, self-talk has been categorized according to the manner in which it occurs. Some self-talk is self-determined, occurring spontaneously such as when an athlete shouts out a frustrated "I stink!" after a missed shot or an enthusiastic "awesome!!" after a great one. Other self-talk is purposefully used to change mood or behavior and may be chosen by an athlete or assigned by a coach or researchers as part of

an experiment. Spontaneously occurring self-talk has been categorized as positive, negative, and instructional. Positive self-talk includes statements that people say to themselves that are encouraging or reflect favorable emotions. In a sport setting, positive self-talk might include statements such as "I can do it," or "Yes!" Negative self-talk involves statements that are negative and/or reflect anger or discouragement such as "you are slow!" or "that's horrible." Instructional self-talk involves providing self direction about the performance of a particular skill or strategy such as "nice loose swing" or "move your feet." More recently, motivational self-talk such as "hang in there" or "come on!" has also been studied in sport settings.

Research on spontaneous self-talk has shown that discouraging events such as losing points in tennis can lead to negative self-talk. Further, spontaneous negative self-talk can lead to poor performance. These results suggest that spontaneous negative self-talk is problematic for competitors. If spontaneously occurring negative self-talk hurts performance, it might make sense that reducing negative self-talk and/or using positive self-talk would be helpful for performance. Research has been conducted to examine the effects of self-talk that athletes and coaches intentionally choose to use. Laboratory studies exploring the relationship between self-talk and performance usually involve participants coming into a laboratory setting and performing sport-like tasks such as throwing darts at a target. Much of this research involves college undergraduates who are not competitive athletes and are not performing in real sport settings. In these studies, the preponderance of research data suggests that positive self-talk is associated with better performances than use of negative self-talk

and that motivational self-talk is particularly effective for tasks requiring power. For tasks requiring precision, instructional self-talk is superior to motivational or no self-talk. Motivational self-talk may be helpful in sport settings. Field studies involving athletes performing sport tasks in non-competitive and actual competition settings confirm that negative self-talk can disrupt performance and that instructional self-talk is a preferred approach. For example, Harvey, Van Raalte, found that golfers who were told to use instructional self-talk while putting showed benefits in terms of consistency. In contrast, the more positive and negative self-talk that golfers used, the less accurate were their putting performances. Similar research conducted with endurance athletes has typically involved assessment of the effects of athletes' associative and dissociative self-talk. Associative self-talk, a form of instructional self-talk, involves a focus on body sensations and noticing how performance is proceeding with self-statements such as "my legs are OK" or "keep shoulders down." Dissociative self-talk involves self-distraction, thinking about tasks to be completed or other people or even listening to music. Skilled performers, especially those working at high levels of effort, perform best when using associative instructional self-talk. When considering laboratory and field studies together, it appears that negative self-talk can be harmful to sport performance and that instructional self-talk can be helpful.

How Does Self-Talk Affect Sport Performance?

A number of mechanisms by which self-talk affects sport outcomes have been proposed. Specifically, it has been proposed that self-talk affects sport performance by causing emotional (e.g., mood, motivation, anxiety) and/or cognitive

(e.g., self-instruction, distraction reduction) changes. Emotional changes may help athletes maintain appropriate levels of motivation, reduce negative emotions and perhaps negative self-talk, and increase self-confidence. Cognitive changes can direct attention to the appropriate movement and help athlete's correct errors and focus effectively on the task at hand. If so much is understood about self-talk and the mechanisms by which self-talk affects performance in sport, then why isn't self-talk used by athletes most of the time? The challenge related to self-talk is knowing exactly what type and how much self-talk is most effectively used for which athletes under which circumstances. Research on choking in sport has demonstrated that instructional self-talk can be performance enhancing for novices.

The same type of instructional self-talk can induce choking in skilled performers. For example, Ford, Hodges, and Williams had skilled soccer players use instructional self-talk, directing attention to their feet during a soccer dribbling task. Those using instructional self-talk dribbled the ball more poorly than did those who did not use self-talk. Starkes demonstrated similar results in their study on soccer players and golfers. Overall, it seems that for highly skilled athletes, use of instructional self-talk can lead to increased attentional monitoring and worse performances, or to put it another way, under certain circumstances, skilled athletes using instructional self-talk may experience paralysis by analysis. If too much instructional self-talk is problematic for skilled performers, then perhaps turning off self-talk is ideal for optimal performance. Leary and Tate discussed the mental states associated with peak performance, flow states, and mindfulness and noted that reduced self-talk is a defining characteristic of optimal performance mental states.

It is not clear, however, if the beneficial effects of mindfulness are due to reduced self-talk or to the effectiveness of the other components of mindfulness. It may be possible for athletes to use self-talk to achieve peak performance and flow states but then experience reduced self-talk during the actual experience of peak performances. This interpretation is supported by qualitative research with high performers and athletes describing flow and peak experiences. Athletes and coaches consistently indicate that self-talk is one of the key components that has contributed to their optimal peak performances.

Personal Factors Related to Self-Talk Use

Another reason that it may be difficult to determine exactly what self-talk is ideal for performance enhancement is that a "one size fits all" approach may not work well for self-talk. Personal and environmental factors can come into play such that certain types and amounts of self-talk are effective for some people and not as effective for others. Van Raalte studied competitive adult tennis players and found that nearly 75% of the athletes spontaneously used negative self-talk after losing a point, perhaps to express frustration. Half of the tennis players used positive self-talk after they lost a point, perhaps to get back on track and to perform better. When it came to the next point, almost all the tennis players performed worse after using negative self-talk, but one player tended to perform better. With regard to positive self-talk, only one player performed better after using positive self-talk, two players performed worse, and the rest were unaffected. These data suggest that there are trends in the ways that people use self-talk but also that there are important individual difference in self-talk uses and effects.

What works for some may not work for others. Wood, looked at another individual characteristic, self esteem, to examine the effects of self-talk. High and low self-esteem participants in their study were asked to repeat positive self-talk statements or were assigned to a no-statement control condition. It might be expected that positive self-talk would be particularly helpful for the low self-esteem participants who might especially need encouragement. Instead, results showed that low self-esteem participants who used positive self-talk such as, "I'm a lovable person" or focused on how that statement was true actually felt worse than those low self-esteem participants who focused on how the statement "I'm a lovable person" could be true or not true. Further, low self esteem participants who used positive self-talk also reported feeling worse than those who did not use positive self-talk at all. For high self-esteem participants, a limited benefit of positive self-talk use was found. Thus, use of positive self-talk may benefit certain people, but may be least effective for those with low self-esteem who *appear* to need positive self-talk the most. Clearly, further research exploring self-talk and other personal factors is needed. When applying these findings, performers may want to try using positive self-talk to see how it works. If positive self-talk appears to be helpful, then continued use makes sense. If not, then other strategies might be worth considering.

Environmental Factors Related to Self-Talk Use

Self-talk affects individuals, but it is important to remember that individuals are not alone, but rather, function within an environmental context. When talking about environmental factors that contribute to self-talk, I use the term "environment" in a broad sense. That is, it includes the social

team environment created by other athletes and coaches as well as the specific sport environment involving practice and competition settings. Research exploring self-talk across settings indicates that self-talk typically used in practice differs from that used in competition. As might be expected, more self-talk is used during competition when intensity is high. Self-talk use also differs across cultures. Peters and Williams compared East Asian and European American students in their use of self-talk and the effects of self-talk on performance. They found that East Asian students used a greater proportion of negative to positive self-talk than did European American students. This greater negative to positive self-talk ratio resulted in better performance for the East Asian students than it did for the European/American students. Thus, the social, sport, and cultural environments may all contribute to how and when self-talk is used and the effects that self-talk has on individuals. For those who find self-talk to be an effective or useful strategy, developing a self-talk plan that includes self-talk use that is matched to the environment and that is flexible might be a valuable tactic for training and competition.

Using Self-Talk in Sport Performance

The body of research reviewed above suggests that using self-talk can be a valuable strategy. How then might an effective self-talk program be designed? Based on the research highlighting individual differences in the effects of self-talk, it is useful to start by understanding how teams or individual performers currently use self-talk. Is selftalk used at all? If so, is it spontaneously generated self-talk, or is it self-talk that has been selected by athletes, coaches, sport psychologists, or important others for a specific purpose? Under what

circumstances are self-talking used or do self-talk occur? How does self-talk affect personal factors (e.g., self-esteem, confidence, motivation)? What is the environment like and how does self-talk fit into that particular environment? How are self-talk and performance related? That is, would reducing negative self-talk be helpful or do certain types of negative self-talk provide motivation? Answering these sorts of questions usually requires athletes to think about themselves, their environments, and sport performances in an unfamiliar manner. Some athletes benefit from self-talk journals, in which they write down their self-talk used and the effects of such self-talk. Some athletes might speak their talk aloud and record it to assess their actual selftalk use. Other athletes might prefer a less academic approach, using imagery to recollect their self-talk or simply choosing to be more aware of their self-talk and then considering how (and if) they might like to use self-talk in a more systematic manner. Once an understanding of current self-talk use is gained, it is important to consider the individual athlete involved. There are a number of self-talk techniques that may be effective for athletes in general. The challenge is finding the right techniques to consider for each individual athlete in his or her individual situation. Several self-talk techniques are described below.

Self-Instruction

For athletes who want to correct or develop specific sport skills, instructional self-talk may be their strategy of choice. For these athletes, simple phrases such as "turn, hit," are reminders that can help athletes reap the benefits of instructional self-talk. The goal is to select instructional self-talk that is at the appropriate level so that the performance

decrements due to excessive attentional monitoring are minimized. Instructional self-talk can also be used to develop psychological skills. For example, athletes may use self-talk to improve mood by choosing self-talk statements to use at critical times that help them feel better, such as "I love this sport." Self-talk can also be used to increase effort, "I can take more pain. I have trained, and I am ready for anything!" or to control attentional focus, "there is only the ball and me."

Thought Replacement

For athletes who find that they are overwhelmed by negative self-talk, thought replacement may be implemented to counteract the problematic effects. Thought replacement is based on the idea that suppressing negative self-talk ("don't think about it anymore") works temporarily at best and sometimes cannot be accomplished at all.To use thought replacement, athletes identify their problematic negative self-talk. Next, they come up with and use alternative thoughts to replace the identified self-talk statements. For example, "this is too hard, I will never get it" might be replaced by, "I've learned hard things before. I can learn this, too." In high pressure situations that lead athletes to say to themselves things such as, "I don't belong here, the competition is too good," negative self-talk can be replaced with the statement made famous by tennis star, Billie Jean King, "Pressure is a privilege – it only comes to those who earn it." With thought replacement, the intentional use of helpful self-talk is designed to provide direct benefits that replace the harmful effects of negative self-talk.

Mindfulness

Both self-instruction and thought replacement are effortful techniques that require athletes to purposely change their self-talk behaviors and patterns. Inherent in these approaches is a sense that self-talk is insufficient or wrong and should be controlled, eliminated, or improved. Athletes who attempt to suppress problematic self-talk such as "don't think about how much I suck" may experience ironic effects of mental control or action such that the thoughts are suppressed for a time but then rebound more strongly later. Mindfulness and acceptance approaches are based on the idea that self-talk and related internal cognitive and emotional states do not need to be replaced or eliminated. With regard to self-talk, positive outcomes can be achieved by practicing nonjudgmental, present-moment awareness and acceptance of naturally occurring self-talk followed by commitment to action. Mindfulness states have been shown to be similar to flow states suggesting that athletes who use mindfulness may be likely to experience flow states more often. As with any behavioral intervention, it is useful to get a baseline of the behavior in question, to try an intervention to enhance performance, and then to evaluate the effectiveness of the intervention. Modifications to the self-talk plan can then be made to help reach optimal performance states. This approach can work for athletes, coaches, and sport psychology consultants. Self-talk, broadly defined, and includes what athletes say to themselves via word or gesture, out loud, or internally and privately. Although more narrow definitions of self-talk exist, this one encompasses the full range of self-talk and related phenomena. Researches conducted on self-talk in experimental and field settings generally suggest

that negative self-talk is associated with poor performance. Instructional self-talk can be useful in certain circumstances. Positive self-talk seems to enhance performance primarily in the laboratory. These generalizations should be carefully considered when applying self-talk interventions to any specific individual. There are large individual and environmental differences in terms of self-talk use and its effects. People who want to try using self-talk in a systematic way can begin by assessing their current self-talk use and its effects. Next, an intervention can be designed to modify self-talk in a particular way. Finally, the intervention can be evaluated and changed to better reach desired results. Athletes and coaches have identified self-talk as a key component in sport success. It seems valuable to consider self-talk as a part of a comprehensive sport or exercise training program. Skilled athletes who regularly perform sporting acts such as shooting free throws in basketball, swinging in golf, and serving in tennis or volleyball demonstrate a consistent use of behavioral routines prior to performance. It seems that they attempt to repeat the same patterns of behavior each time they perform; they don't try to vary these routines, but perform them as fixed rituals. For example, when looking at mega-star athletes such as Cristiano Ronaldo, Kobe Bryant, or Serena Williams, one can observe that they all use some kind of well-established preparatory routine before performing their respective sporting acts – the 11-meter penalty kick in soccer, the free throw in basketball, and the serve in tennis. Scientific and anecdotal evidence suggests that preparatory routines can help performers attain better achievements, if they practice the routines consistently. The purpose of this chapter is threefold: first, to briefly review the experimental, observational, and anecdotal evidence supporting the use

of pre-performance routines in self-paced tasks; second, to present the instructional foundations of a three-phase model for teaching pre-performance routines, including two practical examples of how to use this model; and third, to provide practical tips for sport psychology consultants who work with athletes on developing pre-performance routines.

Pre-Performance Routines: Definition and Settings

A pre-performance routine has been defined as a set of physical and psychological behaviors that is used prior to the performance of self-paced events. This set is typically composed of motor, cognitive, and emotional behaviors that are regularly performed immediately before the execution of self-paced tasks. The resulting routine is part of an athlete's repertoire when preparing to perform. Self-paced events are those that take place in relatively stable and predictable settings, where adequate time is given to prepare for their execution. Examples of these events are golf strokes, a penalty kick in football, and diving (springboard or platform).

The Use of Pre-Performance Routines in Self-Paced Tasks: Scientific and Anecdotal Support

The usefulness of pre-performance routines in self-paced tasks has been indicated in scientific investigations as well as in anecdotal reports from elite performers, leading coaches, and sport psychology consultants.

Scientific Support

Scientific evidence suggests that pre-performance routines are an effective means of promoting physical and psychological readiness prior to the execution of self-paced

sport skills. Data supporting the use of preparatory routines have emerged from two types of studies: observational and experimental. In observational studies, researchers observe performers' overt patterns of behaviors in natural settings, such as when athletes are preparing themselves for self-paced tasks in actual competitions or games. In this type of study, the observer (i.e., the researcher) can accurately and authentically describe behaviors that those skilled athletes exhibit before they perform self-paced tasks. In experimental studies, the researcher can manipulate conditions or treatments that have the potential to enhance behavior. In the case of pre-performance routines, one of the objectives of researchers has been to examine the influence of a given physical/psychological routine on sport performance.

Observational Studies

In one typical observational study, Crews looked at pre-shot routines for two shots in golf the full swing and putting in 12 tour players of the Ladies Professional Golf Association. They found that all the players were consistent in their pre-shot behaviors and the time they used to prepare themselves for the strokes. Some of the patterns of behaviors observed prior to each stroke included: standing behind the ball, setting the club behind the ball with one glance at the target, and setting the feet. The authors also found that the more successful golfers used longer periods of time in preparing for the strokes. Precise information on athletes' patterns of behaviors before performing other self-paced tasks can be found in studies on free-throw shots in basketball, serving in volleyball, and kicking in rugby. Two conclusions can be made based on the observational data collected in the studies on pre-performance routines. First, skilled performers

maintain a consistent set of physical (e.g., positioning, setting the body/body parts, holding the ball/club/racquet, dribbling) and psychological (e.g., external attentional focus, imagery, self-talk) routines during the preparation time provided to them for a given self-paced act. Second, although different performers in a given self-paced act use different routines, a number of physical and psychological behaviors are common among performers.

Experimental Studies

Experimental studies have examined the effectiveness of pre-performance routines in self-paced events such as free throws in basketball, strokes in golf, and serves in volleyball. Two manipulations were typically performed in these studies: manipulations of the regular routines used by the performers (mainly physical routines), and manipulations of imposing psychological routines (e.g., focusing attention, imagery, relaxation) on athletes. When examining the results of the experimental studies on preparatory routines, two main observations can be made. First, imposed pre-performance routines such as external focusing-attention, imagery, and relaxation can facilitate accuracy of self-paced tasks. Second, maintaining a consistent sequence of pre-performance routines can result in improved levels of proficiency.

Anecdotal Support

Additional support for the use of task-pertinent pre-performance routines can be found in anecdotal evidence. Elite athletes, experienced coaches, and sport psychology consultants have all developed pre-performance routines

for self-paced tasks. For example, Larry Bird, the basketball legend and former NBA coach, advised his beginning and advanced basketball players to follow a six-step routine when preparing them for a free-throw shot. Among the steps in his routine were: getting ready (i.e., feeling relaxed and confident when going to the line), getting set (i.e., being in balance at the line), and aiming (i.e., concentrating on the target). For the same skill, the combined efforts of a sport psychology consultant and another leading college basketball coach resulted in the establishment of a six-step routine composed of both physical and psychological elements. Among the physical routines were getting into position at the line, taking a deep breath while holding the ball, and staring at the rim. Examples of the psychological routines were using quick imagery and counting each dribble performed before the shot. For the swing in golf, Coop and Fields developed a pre-shot routine consisting of five steps including signaling entrance to the concentration zone, choosing an intermediate target on the intended line of the shot, and providing a cue or thought that would allow the player to give up voluntary control of the swing and shift to involuntary action. For another self-paced task, serving in tennis, Yandell developed a pre-shot visualization technique focusing on four core serving elements: the ready position, the racket drop, the contact point, and the finish position. Servers create images of these elements to build effective physical and mental models of these patterns of movements. Loehr, who observed elite tennis players' patterns of behavior between points, proposed another pre-performance routine for serving in tennis. According to his observations, servers should use visualization and relaxation techniques to ready themselves psychologically for the

serve, as well as for maintaining a physical routine such as bouncing the ball a minimum of two or three times prior to the serve, and pausing just after the last bounce. Based on this anecdotal evidence we can conclude that practitioners recommend using physical and psychological routines prior to the execution of self-paced sport tasks. Their practical recommendations are in line with most of the findings from observational and experimental studies; namely, that performers could benefit from developing a consistent set of behaviors, and that this set should match their needs and preferences.

Benefits of The Use of Task-Pertinent Pre-Performance Routines

There are a number of explanations for the benefits obtained through the use of task-pertinent preparatory routines. First, performers are able to establish plans of action before they perform their self-paced tasks. They can plan in their minds what needs to be done, how it should be done, and how long it will take them to do it. In essence, pre-performance routines serve as a last-minute preparation for the act. Second, performers can stay focused and overcome external distractions (e.g., noise generated by the audience) and negative internal thoughts (e.g., "I am going to miss this shot). In this respect, the process of focusing attention is enhanced. Third, performers feel in control over what they are doing. They feel that by performing their systematic physical and psychological routines they will be ready to perform and can achieve their best.

Three-Phase Model for Teaching Pre-Performance Routines

Based on empirical inquiries and anecdotal evidence, some of which have been reviewed in this chapter, I am proposing a three-phase model for teaching pre-performance routines. The model contains the following phases: preliminary preparatory instructions (Phase 1), task-specific preparatory instructions (Phase 2), and preparatory instructions for the real-life self-paced event (Phase 3). Detailed information on this model can be found in Lidor.

Phase 1: Preliminary Preparatory Instructions

The objective of Phase 1 is to expose learners to basic fundamentals of both physical and psychological preparatory routines associated with self-paced tasks. It should be explained to learners that preparatory routines are integral to self-paced tasks. The verbal instructions given to the learners, combined with a set of actual demonstrations (i.e., modeling) of the task, should convince them that the routines need to be an integral part of the task. In this phase, learners are provided with various opportunities for practising different routines. They are told what the typical routines are that can be performed before the task, and are provided with the instructional opportunities to practice all of them. They need to experience different physical and psychological routines to be able to select the most appropriate ones for them. Phase 1 of the model reflects a collaborative instructional process. For example, one of the instructional objectives of sport psychology consultants is to determine which routines the athletes prefer to use, and what they actually think about the new routines they are

trying to adopt. The perceptions and thoughts of the learners about what might be the most effective routines for them should be considered in the initial phase of the preparatory instructions. During this phase of learning, emphasis should be made on the psychological routines (e.g., focusing attention, imagery, self-talk) that the learners perform prior to the self-paced event. The physical preparatory routines can be naturally integrated into the specific learned task, for example dribbling before serving in volleyball, or dribbling before shooting free throws in basketball. Nevertheless, this "natural fit" may not be the case with psychological routines: learners may have difficulty integrating psychological skills into the learning process if they are not explicitly taught how to do so. Therefore, learners should not be only instructed how to apply psychological routines such as imagery and external focusing/attention, but must also be provided with enough time to practice these routines so that they will be able to select the ones most appropriate for their own use.

Phase 2: Task-Specific Preparatory Instructions

The objective of this phase is to enable learners to adopt a consistent set of physical and psychological routines that best reflect their individual needs and preferences. After practicing and experiencing different physical and psychological routines during Phase 1, in Phase 2 learners should select one set of physical and psychological routines that will be performed each time they ready themselves for a specific self-paced event. Athletes should feel comfortable in performing their selected set of routines; they should feel that this set is an integral part of the learned/performed self-paced task. Sport psychology consultants can motivate learners to adopt a set of preparatory routines by sharing

with them those routines that skilled athletes regularly perform. They can run videos of well-known athletes who are preparing themselves for self-paced acts, and discuss what the most salient physical elements are that these athletes consistently use in their routines. Instructors in this phase can also use findings from observational studies examining the use of physical routines in skilled performers. As in Phase 1, emphasis is placed on adopting a consistent set of psychological routines prior to the execution of the self-paced task. These routines should be practiced repeatedly until the athletes feel comfortable using them in real self-paced events, namely those that occur in competitions and games.

Phase 3: Preparatory Instructions for The Real-Life Self-Paced Event

The objective of this phase is to enable athletes to practice their selected preparatory routines in settings that reflect the actual real-life self-paced events they may potentially face in competitions and games. In this phase, the routines are practiced while taking into account two situational conditions: time constraints and external distractions. In most self-paced events, performers face time constraints when preparing themselves for the act. For example, according to the rules of international basketball, players standing on the free-throw line are allowed 5 seconds to prepare themselves for the free-throw shot after receiving the ball from the official (International Basketball Federation, 2008). While practicing preparatory routines before self-paced tasks, learners should ensure that the physical and psychological routines they have selected can be performed

within the allowed preparatory time intervals. In this phase, learners should also practice their routines under distracting conditions, such as loud crowd noises. Whereas in Phases 1 and 2 the athletes practice the routines under relatively relaxed learning conditions, in Phase 3 they are taught to use the routines in more challenging situations. For example, in real-life ball games, players who are preparing themselves for self-paced events are typically faced with external distractions from players on the opposing team (e.g., "trash talk," hostile verbal behavior), as well as noise generated by the crowd. Practicing the routines under challenging conditions should help learners effectively transfer them to real-life events, particularly if the training situations are similar to the ones they will face in actual competitions.

Applying the Teaching Model to Sport Skills

I have selected two self-paced sport skills, shooting free throws in basketball and performing a golf stroke from a tee, to demonstrate the use of the proposed model in teaching pre performance routines. The reason these skills were selected is that there is a considerable amount of scientific and anecdotal support for the effectiveness of the physical and psychological routines accompanying these skills.

Shooting Free Throws in Basketball

Pre-performance instructions are given for each phase. In each phase, instructions are given separately for developing the physical and psychological components of the routines.

Phase 1: Preliminary Preparatory Instructions

The objective of this phase is to help learners practice those behaviors that they may use while standing at the free-throw line and preparing themselves for the shooting act. Learners should experience various physical and psychological behaviors before selecting one set of behaviors that they will use consistently prior to each shooting attempt. Nevertheless, for shooters to effectively perform the proposed physical and psychological routines, they can start using them from the moment they know that they are going to make a free-throw shot (e.g., after the player has been fouled). found that approximately 19 seconds (unofficial pre-performance time) were available to adult and youth basketball players before the ball was actually handed to them by the referee. During this interval, players went to the free-throw shooting area, and while waiting at the shooting line they bent their knees, wiped their hands with a towel, and adjusted their shorts and tops. When standing at the free-throw line shooters also used this unofficial pre-performance time to imagine themselves performing the shot, focus attention at the rim, and verbalize selected cue words, such as "calm" and "focus." Appropriate use of the unofficial pre-performance interval can create a longer period of time for preparation, and therefore benefit those performers who may need additional time for readying themselves for the free-throw shot. Physical routines while at the free-throw line, learners should:

- Search for the most comfortable area facing the rim;
- Decide on the most comfortable readying position;

- Dribble the ball while standing at their preferred position: the number of dribbles should be varied – 2 dribbles, 3 dribbles, 4 dribbles – according to the number that is most comfortable for the player;
- Hold the ball while inhaling deeply and exhaling slowly: The time of holding should be varied – 1 s, 2 s;
- Spin the ball with the hands; time of spinning should be varied – 1 s, 2 s– shoot the ball at the basket.

Psychological routines

While standing at the free-throw line, learners should:

- Search for the most appropriate area at the front of the rim for an external focus of attention;
- Image them shooting the ball while focusing attention at the front area of the rim;
- Decide on verbal cues to be used before each shot; athletes should experience the use of different words, or short sentences, which they would feel comfortable verbalizing while preparing themselves for the shot.

Phase 2: Task-Specific Preparatory Instructions

The objective of this phase is to enable learners to establish a consistent set of physical and psychological routines that they will perform before each free-throw attempt. After experiencing different routines in Phase 1, one routine composed of both physical (e.g., dribbling the ball four times consecutively, holding the ball for two seconds) and psychological (e.g., imaging a successful shot for two seconds, verbalizing the word "high") behaviors should

be selected. Learners should be aware of the established order of both the physical and psychological components in the routines they use. They should also use structured self-reflection for assessing the contribution of the selected routines to their shooting performance. Emphasis should be made on consistent use of the selected routine, regardless of the outcome of the shot.

Phase 3: Preparatory Instructions for the Real-Life Self-Paced Event

The objective of this phase is to enable learners to practice the established routines under challenging conditions. In this phase the periods of time used by shooters prior to each free throw attempt after they receive the ball from the referee should be measured, to ensure that they do not use more time for preparation than the time intervals allowed according to the rules of the game (i.e., 5 s). In addition, shooting attempts should be made under distracting conditions, such as noise generated by a tape recorder located about 2-3 m from the shooter, or verbal interference made by the sport psychology consultant or teammates (e.g., "you are going to miss the shot," "think what happens if you miss this shot"). As in Phase 2, emphasis should be made on consistent use of the routines before each shooting act.

Performing a Golf Stroke from the Tee

Pre-performance instructions are given for each phase and for the physical and psychological routines separately in each phase.

■ Decide on verbal cues (e.g., "I am ready," "distance," "go") to be used before each stroke.

Phase 2: Task-Specific Preparatory Instructions

The objective of this phase is to enable learners to develop a fixed set of physical and psychological routines they will use prior to each stroke. A developed routine may be composed of physical components such as one comfortable readying position and a fixed number of continuous practice swings, and psychological components such as looking at the target and imagining a successful stroke.

Phase 3: Preparatory Instructions for the Real-Life Self-Paced Event

In this phase, learners practice their established golf routines under challenging conditions. For example, routines should be performed while playing on different courses and at different distances from the target. As in Phase 2, emphasis should be made on consistent use of the routines, regardless of the outcome of the stroke. The routines proposed for free-throw shots in basketball and strokes in golf reflect both scientific and anecdotal evidence. These routines illustrate a few physical and psychological behaviors that can be used effectively by performers readying themselves for self-paced events. Performers can develop other task-pertinent routines according to their needs and preferences. They should spend time not only on developing their routines, but also on practicing them repeatedly so that they will become an integral part of the self-paced task. The three-phase model proposed in this chapter can help performers plan effective learning environments for pre-performance routines.

Practical Suggestions for Teaching Pre-Performance Routines

■ Effective pre-performance routines should be composed of both physical and psychological components. Practice should be devoted to both components.

■ Physical routines (e.g., positioning, dribbling, holding the ball) are perceived as an integral part of the self-paced skill. These routines can be presented to the learner as part of the physical and technical foundations associated with the task.

■ Instructional effort should be made to develop task-pertinent psychological routines. Routines such as an external focus of attention, imagery, or self-talk should be presented at early phases of learning, and integrated naturally into the physical routines (e.g., focusing attention at the rim while dribbling the ball before shooting a free-throw shot).

■ Athletes should experience various physical and psychological routines at early phases of learning before selecting one fixed routine.

■ Instructors should encourage learners to use the physical and psychological routines demonstrated by skilled performers, but these routines should be modified according to the learners' own preferences.

■ Athletes should practice their selected routines not only under relaxed learning conditions (Phases 1 and 2 of the proposed model), but also under distracting conditions (Phase 3) that reflect actual competition and game situations. Researchers and practitioners have long considered psychological factors as

essential ingredients for performance excellence and well-being across a number of settings. Athletes and coaches commonly describe an athlete's "mental game" as one of the key distinctions between good and great athletes. Mental toughness is the umbrella term that coaches, athletes, sport psychologists, and the media use when referring to the constellation of psychological factors that appear to discriminate good and great athletes. Although once considered a little-understood construct, the knowledge base contributing to current conceptualizations of mental toughness now has some scientific rigor owing to the efforts of several groups of researchers. Researchers have studied the perceptions of athletes and coaches from a variety of team (e.g., rugby union, netball, football) and individual sports (e.g., swimming, triathlon, boxing) in an attempt to identify the make-up of mentally tough performers. Recent investigations have adopted a context-specific approach in which mental toughness is examined within a single sport (e.g., cricket, soccer) to provide a context-rich understanding of this construct.

Core Components of Mental Toughness

Perhaps the most common finding from the available empirical literature is that mental toughness appears to be multifaceted with multiple key components. These key components can be broadly classified as values, attitudes, cognitions, and emotions. Among these broad components, there seem to be several central characteristics (e.g., self-belief/confidence, personal values, attentional control, self-motivation, positive and tough attitudes, enjoyment and

thriving through pressure, resilience, sport intelligence) that are common across all the sports sampled thus far, suggesting that this constellation of core psychological characteristics would not vary significantly by sport. The cohorts sampled in the investigations to date, however, are certainly not representative of most sport participants. There are some variances in key characteristics that seem to provide sport-specific information (e.g., team unity, ability to react quickly) suggesting that mental toughness may be somewhat contextually bound.

Defining Mental Toughness

Gucciardi recently defined mental toughness as a collection of experientially developed and inherent sport-specific and sport-general values, attitudes, emotions, and cognitions that influence the way in which an individual approaches, responds to, and appraises both negatively and positively construed pressure, challenge, and adversity to consistently achieve his or her goals. Unlike previous definitions of mental toughness, which focus specifically on the end-state of being mentally tough, Gucciardi *et al.*'s definition captures the holistic nature of mental toughness. Specifically, the definition highlights the multidimensional nature of mental toughness, its usefulness for dealing with and thriving through both positively and negatively construed situations, and the processes by which mental toughness operates. The notion that mental toughness is useful in dealing with and thriving through both positively (e.g., winning streak, individual good form) and negatively (e.g., injury, individual poor form) construed situations on and off the field provides an important conceptual distinction from the related resilience construct. Unlike resilience, which is

largely about withstanding, recovering, and adapting from adversity or risk (i.e., situations known to be associated with negative outcomes; mental toughness encapsulates one's ability to deal with and thrive through pressure, challenge, and adversity when things are going well in addition to when things are going poorly. One criticism that can be made of the Gucciardi. definition is that it implies that goal achievement is a necessary component of mental toughness. Some may consider individuals who do not consistently reach their goals but maintain unswerving motivation and drive in the face of regular suboptimal performances as mentally tough.

Measuring Mental Toughness

The lack of a clear conceptualization and operational definition of mental toughness has meant that there have been few attempts to develop inventories that profile and assess mental toughness in sport. Loehr's Psychological Performance Inventory (PPI) has been the most influential and widely employed inventory for measuring mental toughness in both applied and research settings. The PPI measures what Loehr claimed to be the seven most essential ingredients of mental toughness: self-confidence, attention control, negative energy, motivation, attitude control, positive energy, and visual and imagery control. Nevertheless, Loehr offered no psychometric support for its use and subsequent research has questioned the psychometric structure, reliability, and validity of the PPI. Based on their 4Cs model of mental toughness consisting of three elements of the dispositional construct of hardiness and confidence, Clough *et al.* constructed a 48-item questionnaire referred to as the MT48. Clough *et al.* reported that the MT48 has excellent test-retest reliability (0.90), adequate internal reliability

($\square$ = 0.71 to 0.80), and can distinguish participants reporting high and low MT48 scores in terms of exertion ratings during a 30-minute cycle ride. Nevertheless, Clough *et al.*'s account of the research process was brief and did not provide details regarding the methodologies employed to develop their model and associated inventory. Such brevity does not convey the extent to which the methodologies employed demonstrate rigor, reliability, and validity. Moreover, Clough *et al.* have not demonstrated that their measure of mental toughness, and therefore their 4Cs model, can be differentiated from psychometrically sound hardiness measures, thereby adding to the conceptual confusion that exists between mental toughness and resilience or hardiness. Mental toughness appears to consist of both sport-general and sport-specific components. Researchers have recently demonstrated the usefulness of sport-specific inventories in measuring mental toughness in Australian football. Nevertheless, it is important to recognize that triangulation assessment procedures will provide a more reliable indicator of mental toughness, because single-case inventory assessment procedures remain open to potential bias. Obtaining multiple sources of information on athletes' mental toughness from their coaches, and parents, or teammates affords a means by which to triangulate data in the absence of, for example, behaviorally-based assessments or implicit measures of mental toughness. An evaluation tool that includes observable and measurable behaviors considered indicative of mental toughness has yet to be developed and to date only Gucciardi. have generated a preliminary conception of mentally tough behaviors. An understanding of the situations where the components of mental toughness are considered useful will facilitate

coaches' and practitioners' endeavors in developing context-specific behavioral checklists for mental toughness.

Mental Toughness Within the Framework of Positive Psychology

Seligman suggested three missions of the psychology profession: (a) treating mental illness, (b) making people stronger and more productive, and (c) actualizing human potential. Consistent with the field of positive psychology, the development of mental toughness is concerned mostly with the latter two missions of psychologists. Positive psychology foregrounds the development of competencies or qualities that enable humans to flourish. Development of the personal traits associated with mental toughness (e.g., optimism, hope, courage, perseverance, self-determination) is consistent with the strengths-based approach of positive psychology. A strengths-based approach promotes quality of life by developing positive individual characteristics that act as buffers against unhelpful reactions to positive and negative life events.

The challenge for practitioners is how to foster these positive human qualities in others. Recent organismic theories such as self-determination theory view humans as active organisms who are adaptive and volitional, and who initiate behaviors to satisfy their innate psychological needs and physiological drives. These theories underscore the importance of the social-contextual environment (e.g., coach–athlete–performance relationship) in nurturing the satisfaction of the psychological needs of humans, which leads to growth and actualization of human potential.

Those empowered to influence others can nurture positive individual traits or qualities that promote human flourishing.

Developing Mental Toughness: the Practitioner's Role

Facilitating the development of mental toughness beyond that which occurs naturally through normal development involves the interaction of both environmental and intrapersonal issues (e.g., coach-training and athlete-centered programs). Key individuals in the socialization network such as parents, siblings, coaches, and teammates play pivotal roles in fostering home, school, and sporting environments that encourage the development and maintenance of those values, attitudes, emotions, and cognitions encompassing mental toughness. Nevertheless, the optimal learning and motivational environment in the early years of individuals' development in sport is not necessarily the same as the optimal learning and motivational activities in later years. For example, practitioners working with youth athletes might focus on working with coaches and parents, with the focus on psychological skills training for experienced athletes.

Critical Incidents: Opportunities for Growth

Previous research has highlighted the importance of perceived critical incidents (e.g., disruptions at school) that occur throughout individuals' development as playing important roles in cultivating mental toughness. Both positive and negative incidents occurring within and outside of sport settings provide important means by which to facilitate mental toughness. It is not so much what happens

to athletes (in and out of sport) but how they interpret what happens, including the causes of those events. Athletes will experience a range of life events pleasant and unpleasant. The key to developing mental toughness is learning to adaptively respond to these critical incidents or opportunities for growth. Athletes should be encouraged to view challenges or critical incidents as opportunities for growth. For example, non-selection in a representative team could be viewed as fueling the "hunger" of athletes to work harder to improve performance. The process of reflection is an important tool for empowering individuals to view life experiences in adaptive ways. Using reflective practices, performers can become internally motivated by perceptions of being in control and can influence their future behavior.

Reflection-on-action is the analysis, synthesis, and evaluation of information post performance. Reflective journals and training diaries to record post-performance evaluation/reflection are useful means of developing the ability to self-reflect. The ability to self-reflect requires structured guidance (e.g., constructive feedback) from psychologists and coaches as well as regular practice. Communication strategies that promote reflection-on-action involve messages that encourage individuals to engage in processing why and how an action emerges from, and serves to create, the affective and psychological environment. Research shows that reflection-on-action that enhances communication can facilitate the development of individuals' social-cognitive and functional communication skills and promote the development of advanced thought processes and behaviors such as perspective-taking, reasoning, and logic. Mental toughness can be promoted through guided reflection-on-action. For example,

practitioners may facilitate conversations with athletes about mental toughness in their sports, perhaps with a focus on specific behaviors and cognitions. Sport psychologists can promote athletes' abilities to explore alternative ways of construing critical incidents that foster mental toughness and personal growth. For example, athletes can reflect on conversations about cognitions associated with particular situations that require mental toughness (e.g., positive self-talk).

Coach-Mediated Learning Environment

Social-contextual conditions can foster personal growth and actualization through socialization; that is, adopting certain attitudes, beliefs, and values from significant role models (e.g., parents, siblings, coaches, teachers). Coaches can design adaptive learning conditions that promote human growth. Creating a coach–athlete–performance environment for developing mental toughness can be the responsibility of the coach. Sport psychologists can play a pivotal role in guiding coaches in how they might develop these qualities in their athletes. They can work indirectly through the coach and/or directly with the athletes in developing a range of psychological skills aimed at developing these mental toughness qualities. Developing mental toughness is central to athletes enjoying their sporting experiences and learning to get the best out of themselves. The role of significant others in developing positive psychological qualities has been frequently reported. Furthermore, research on mental toughness supports the view that this psychological construct can be developed. Although coaches may play a less important role than parents in facilitating athletes' mental toughness, research has shown they can be influential.

For example, in Coulter's qualitative study on elite football (i.e., soccer) players in Australia, coaches were reported as helping players in their formative playing years to develop tough attitudes such as valuing hard work, patience, and sacrifice (considered necessary to be successful players) through the in situ teaching of mental skills to cope with anxiety and pressure, and the ability to focus on the task at hand. Furthermore, coaches were found to promote self-belief and acknowledge when players were mentally tough. Coaches are responsible for designing adaptive learning environments that facilitate athletes' mental toughness; however coaches may not have the knowledge or skills to develop athletes' mental toughness. Therefore, sport psychologists can assist coaches in understanding the concept of mental toughness and its development within the sporting environment. Furthermore, sport psychologists can support coaches in designing optimal learning environments as well as provide feedback to coaches about how their coaching behaviors can facilitate or thwart mental toughness. As architects of the learning environment coaches' behaviors will influence the thoughts, feelings, and behaviors of the athletes they coach. An autonomy-supportive approach to coaching, based on SDT, is consistent with two key missions of positive psychology: (a) making people stronger and more productive, and (b) actualizing human potential. Increasing internal (self-determined) motivation promotes a sense of personal control and associated positive outcomes in the way athletes think, feel, and act used as an autonomy-supportive approach to coaching Australian Olympic relay teams, consistent with the suite of autonomy-supportive pedagogical behaviors identified by Mageau. He sought to develop positive psychological qualities such as those

identified in research on mental toughness (e.g., self-belief, autonomy, internal motivation, courage, pursuit of excellence). Essentially, the autonomy-supportive approach to coaching shifted responsibility for learning to his athletes to promote self determination, personal ownership, and intelligent performance (e.g., remaining calm and problem-solving under pressure). He used guided discovery and problem-solving approaches to instruction that featured divergent and convergent questioning. The following autonomy-supportive behaviors characterized his approach to coaching:

- Offering choices (within boundaries) – for example in the design of some content for training sessions;
- Allowing athletes to work independently and interdependently with input into solutions for solving problems associated with performance;
- Supplying rationales for coaching decisions – why is the task important?
- Involving athletes in discussions to seek their opinions on improving performance (e.g., race tactics); and
- Providing competence (informational) feedback – non-controlling feedback (including self and peer feedback) that focused on what was good, what can be better, and how they can improve. Extensive research using SDT strongly supports the adoption of an autonomy-supportive approach to coaching because it can create an adaptive motivational climate which, in turn, can provide positive outcomes in terms of performance, persistence, effort, and levels of concentration. We argue that focusing on athletes' strengths and promoting ownership and control of

their performances sends a message of competence to athletes, and encourages autonomy. Finally, coaches' abilities to model mental toughness can be influential in developing athletes' mental toughness. Learning from modeling the behaviors of significant others is not uncommon. For example, athletes are likely to model coaches' behaviors that demonstrate confidence, calmness under pressure, courage, diligence, and positive but tough attitudes such as valuing hard work, patience, and sacrifice, and resilience. How coaches respond to critical incidents in athletes' performances (e.g., missing both free throws in the final seconds of a basketball match, which the team loses) can either facilitate or thwart the development of mental toughness. Moreover, the decisions coaches make can send undesirable messages to athletes. For example, coaches should promote and demonstrate appropriate risk-taking in sport rather than potentially modeling "a fear of failure" (e.g., defending a lead). Practitioners can support the coach–athlete–performance relationship by working directly with coaches in designing adaptive learning environments that facilitate the development of mental toughness qualities.

Psychological Skills Training for Athletes

The question remains, however, what happens if individuals have not been exposed to such facilitative environments during their formative and junior sporting years? Can extra efforts make up for the absence of these experiences? Aside from natural learning experiences, critical incidents,

and coach-mediated learning environments, psychological skills training (PST) programs focusing on either single psychological skills or multimodal packages integrating more than one psychological skill or technique afford one method by which practitioners can attempt to make up for limited facilitative developmental experiences. The aims of PST programs are to educate and equip athletes with techniques and strategies that can be used to assess, monitor, and adjust their thoughts and feelings to produce psychological states that both facilitate performance and foster positive personality characteristics through psycho educational workshops and activities. Both single psychological skill and multimodal packages have been shown to be effective in enhancing psychological and life skills associated with mental toughness as well as facilitating athletic performance and promoting personal development. Recent research provides support for the premise of offering PST packages by demonstrating the effectiveness of two multimodal packages in enhancing mental toughness among youth-aged Australian footballers. The first package consisted of six psychological skills commonly employed in PST programs (self-regulation, arousal regulation, mental rehearsal, attentional control, self-efficacy, and ideal performance state). In contrast, the second targeted the keys to mental toughness in Australian football (self-belief, work ethic, personal values, self-motivation, tough attitude, concentration and focus, resilience, handling pressure, emotional intelligence, sport intelligence, and physical toughness) identified by Gordon. Overall, the results showed that participation in both programs resulted in improvements in self-reported mental toughness, dispositional resilience, and flow. Parents and coaches

also reported similar improvements in footballers' mental toughness. Both PST packages appeared to be as effective as each other in enhancing mental toughness. Predictably, a control group receiving no psychological intervention did not show significant changes in mental toughness, resilience, or flow. Caution is urged when interpreting the findings from Gucciardi intervention research, because the improvements in perceived reports of mental toughness, resilience, and flow were changes in scores on inventories and were not linked with measurable and observable behavioral outcomes reflecting key performance indicators in Australian football.

Program Evaluation

Aside from the Australian Football Mental Toughness Inventory, no other psychometrically sound measure of mental toughness currently exists. Until such a measure is developed, the revised performance profile technique affords one method by which practitioners and coaches can evaluate the effectiveness of an endeavor designed to facilitate or enhance the development of mental toughness. The performance profile is a client-centered assessment procedure that charges athletes with an active role in determining the psychological skills or qualities that are important for performance in their sports and thus warrant assessment. Performance profiling is in direct contrast to traditional psychometric assessment procedures in which the practitioner imposes the important skills or qualities upon athletes. After generating a list of those qualities or skills athletes believe are fundamental to performing at the elite level in their sports or performing to the best of their abilities, athletes then provide an assessment of their current selves on each of the identified qualities. Although the

performance profile technique is commonly employed to elicit attributes that constitute the fundamental qualities of an elite performer in one's sport, Gucciardi and Gordon provided an example of how the performance profile can be used to explore and examine changes in mental toughness with an Australian footballer. In addition to presenting practitioners with a useful tool for monitoring and evaluating performance, the performance profile enhances self-awareness, intrinsic motivation, self-confidence, and team communication, and can be used as a basis for goal setting. Recent advancements in mental toughness research have provided evidence for the conceptualization of mental toughness as a multidimensional construct made up of sport-general and sport-specific components derived largely from experience but involving some genetic components. Key mental toughness components influence the way individuals approach, respond to, and appraise both positively and negatively construed situations involving varying degrees of pressure, challenge, and adversity. Understanding and learning from critical incidents, developing coach-mediated learning environments, and training in psychological skills affords practitioners and coaches opportunities by which to facilitate the development of mental toughness beyond that which occurs through natural development. The performance profile represents a simple and flexible method to assess mental toughness and the effectiveness of interventions designed to develop or enhance this desirable construct, until a measure is developed. One could conclude that mental toughness has only optimal outcomes for athletes; however, it is important to note there is no research to date that has provided a link between mental toughness and observable and measurable performance outcomes. Until such evidence

is presented we can only speculate as to the potential that mental toughness may have for subsequent performances. Little attention has been given to potentially dysfunctional outcomes not only for performance but also for general well-being. For example, some components of mental toughness such as tough attitudes and physical toughness may cause athletes to push themselves beyond their physical limits during rehabilitation exercises in an attempt to speed up the rehabilitation process thereby (negatively) affecting their injuries. It may also be that optimistic tendencies influence mentally tough athletes to appraise their injuries to be less severe and, in turn, place little importance on complying with their rehabilitation programs. Subsequently, mentally tough athletes may be more prone to playing while injured. An internalized desire to achieve success and an attitude to "never accept mediocrity" combined with an insatiable work ethic may also place mentally tough athletes at greater risk of overtraining. In addition to the physical and psychological effects of overtraining, personal relationships with loved ones such as partners, parents, and children may be affected by the desire to do whatever it takes to succeed in sport. Nevertheless, further research is needed regarding this potential "dark side" of mental toughness. Finally, there is still some debate regarding the most appropriate definition and conceptualization of mental toughness. Given that mental toughness research and theory are still in their infancies, we envisage that the coming years will produce conceptual clarity stemming from quality investigations.

Tips

Take-home messages about mental toughness for practitioners and coaches

- Key components are made up of a collection of sport-general and sport-specific values, attitudes, emotions, and cognitions.
- Key components enable individuals to deal with and thrive through both positively and negatively construed situations.
- Key components influence the way in which athletes approach, respond to, and appraise situations demanding mental toughness.
- Performance profiling affords a simple method by which to measure mental toughness in the absence of established self-report inventories.
- Obtaining multiple ratings of mental toughness from athletes, their coaches, and parents can help alleviate some of the concerns associated with self-report.
- Both environmental and intrapersonal issues should be considered when attempting to facilitate the development of mental toughness beyond that which occurs through natural development.
- Optimal learning and motivational climates differ at various stages in athletes' development.
- Coaches are key players in the development of athletes' mental toughness.
- Critical incidents are opportunities for growth.
- The design of adaptive coach–athlete–performance environments can promote athletes' mental toughness.
- Psychologists and coaches can work interdependently to facilitate the development of mental toughness.
- Psychological skills training programs targeting key components of mental toughness are effective in

enhancing mental toughness. For example, exercises identifying individual and team standards for work ethic, sources of confidence, and solution-focused coping strategies can assist in the development of work ethic, self-belief, and resilience components of mental toughness, respectively.

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