

# A Qualitative Exploration of Psychological-Skills Use in Coaches

**Richard C. Thelwell and Neil J.V. Weston**

University of Portsmouth

**Iain A. Greenlees**

University of Chichester

**Nicholas V. Hutchings**

University of Portsmouth

The current study examined whether, where, when, and for what purposes coaches use psychological skills. A total of 13 elite-level coaches completed a structured interview using open-ended questions to examine their use of self-talk, imagery, relaxation, and goal-setting skills. Data were analyzed via deductive content analysis and indicated self-talk and imagery to be cited more frequently than relaxation and goal setting throughout the interviews. In addition, some purposes for using each skill were specific to training or competition across each time frame (before, during, and after), whereas there were several purposes consistent across each environment. Although the findings suggest that coaches employ psychological skills, it is imperative that they become aware of what skills they require and what skills they possess if they are to maximize their use across their wide-ranging coaching roles.

It is widely accepted that the coach contributes to the performance of teams and athletes (e.g., Gould, Greenleaf, & Dieffenbach, 2001; Gould, Guinan, Greenleaf, Medbery, & Peterson, 1999), but what is less clear is the extent to which the coach can, or should, be considered a performer. For example, Gould, Greenleaf, Guinan, and Chung (2002) stated that coaches are often required to deal with difficult situations (e.g., selection, tactics, team and athlete performance-related issues, decision making) while also ensuring that their own psychological and emotional states remain optimal. Finally, it is often claimed that the coach is the first person that elite athletes look to for advice, guidance, and support when they are experiencing difficulty, especially during athletic contests (Bowes & Jones, 2006). This suggests that coaches should not portray cognitions or behaviors that indicate their inability to cope with the situation they are in.

Given the plethora of coach roles that bridge the chasm across technical, physical, coordination, and psychological challenges, it is clear that the coach could well be labeled a performer. What is not known, however, is the degree to which

---

Thelwell, Weston, and Hutchings are with the Dept. of Sport and Exercise Science, University of Portsmouth, UK. Greenlees is with the School of Sport, Exercise, and Health Sciences, University of Chichester, UK.

coaches use psychological skills to enable them to perform. Such issues have been tentatively reported in the literature when, for example, Martens (1987) suggested that coaches should become aware of their attentional styles by stating

Do you attend to all the right things during the contest? Are you able to keep your attention on the game—deciding the next play, making a tactical move, bringing in a substitute—in the face of a bad call, a serious error, or with time running out? (p. 137)

In addition to this is a comment from Voight and Carroll (2006) concerning an interview conducted with Pete Carroll (ex-head coach of the New England Patriots in the NFL). In the interview, Coach Carroll talked of his use of imagery to enable a vision of desired performance levels and a direction toward which the team would direct their efforts. Unfortunately, such reports are few and far between and are limited to anecdotal accounts rather than scientific examination. As a result, there remains a lack of psychological-skills knowledge for coaches in terms of whether, and for what purposes, they are employed. This is in contrast to the athlete literature that is abundant, which research evidence reporting their use of psychological skills.

It is appropriate to mention here that the four psychological skills providing the main focus in the current study were purposefully selected because of their frequent employment in the psychological-skills literature. The skills of self-talk, imagery, relaxation, and goal setting have frequently been the focus in questionnaire-based studies even though the Test of Performance Strategies (TOPS; Thomas, Murphy, & Hardy, 1999) used to measure them has a total of eight psychological skills or strategies available for measurement. Instead, researchers (e.g., Fletcher & Hanton, 2001; Harwood, Cumming, & Fletcher, 2004) have tended to focus on the aforementioned four skills rather than all eight across training and competition domains. Furthermore, even when all eight skills have been measured in research (e.g., Frey, Laguna, & Ravizza, 2003), the authors have not always reported subscale scores and instead have collapsed all the psychological skills from the TOPS into a single psychological-skill score (thus negating the variety of skills within the TOPS). The four skills have also received widespread attention in both single-skill (e.g., Evans, Jones, & Mullen, 2004; Johnson, Hrycaiko, Johnson, & Halas, 2004) and multiple-skill (e.g., Hanton & Jones, 1999; Thelwell, Greenlees, & Weston, 2006) applied studies. Finally, although we acknowledge the alternative psychological skills used in sporting performance, they decided to limit the number of skills to the four mentioned previously, given that this article represents the first study examining psychological skills in a coaching context. As such, the following section will provide a brief insight to each skill from an athlete perspective and suggests why they might be employed by coaches.

Although not reviewed in detail here (see Hardy, 2006), athletes' use of self-talk has received considerable attention in that it has been reported to be used for motivational (mastery, arousal, drive) and cognitive (specific, general) benefits by athletes (Hardy, Gammie, & Hall, 2001). Furthermore, positive self-talk is reported to be more functional than negative self-talk for many performers (Dagrou, Gauvin, & Halliwell, 1992), with individuals varying in their use of self-talk between a covert internal method to an external audible, and at times to a visual (via gestures),

form (Van Raalte, Cornelius, Brewer, & Hatton, 2000). A number of intervention studies also reflect the potential benefits of self-talk with specific types being shown to enhance, for example, soccer shooting performance (Johnson et al., 2004) and basketball drills (Perkos, Theodorakis, & Chroni, 2002). Coaches might employ self-talk to help them maintain focus toward the end of a training session (as is often the case with performers), or they might use it to rehearse what they tell their performers to ensure that their communication style is appropriate, understandable, and correct in terms of their content and delivery. Given that self-talk also has an observable aspect, it might be that self-talk is used by coaches to display pleasure or displeasure toward athletes without having to verbalize their thoughts.

Like self-talk, imagery has also received a great deal of research attention (see Morris, Spittle, & Watt, 2005, for a detailed review) and is widely reported to be used by athletes in both training and competition environments (Gould et al., 1999). One of the most insightful studies was by Munroe, Giacobbi, Hall, and Weinberg (2000), who examined the four Ws of imagery. Similar to the findings reported by Hardy et al. (2001), imagery was often used in a motivational (specific, general arousal, general mastery) or cognitive (specific, general) manner and was used before, during, and after both training and competition. In addition to identifying how athletes use imagery, a number of intervention-based studies have examined how, for example, it develops confidence (e.g., Callow & Hardy, 2001) and performance (e.g., Evans et al., 2004). Similarly, coaches might employ imagery to develop a picture in their minds of what the skills should look like or how their coaching sessions should progress. They might also use it to help them relax during competition, when coaches are likely to experience heightened pressure and thus might need to “escape.” Furthermore, in accord with the reports from Voight and Carroll (2006), coaches might use imagery to envisage performance and how teams function together.

Although self-talk and imagery have received varying research interest, relaxation has received most of its attention via intervention-based studies alone. Specifically, much of the work has focused on the reduction of competitive anxiety (e.g., Maynard & Cotton, 1993) and the mechanisms to increase the directional perceptions of the anxiety response (Maynard, Hemmings, & Warwick-Evans, 1995). More recently, relaxation has been employed in intervention studies via centering (e.g., Rogerson & Hrycaiko, 2002). These findings coincide with anecdotal athlete reports that suggest relaxation strategies to be effective and necessary for achieving performance excellence (e.g., Gould, Greenleaf, Chung, & Guinan, 2002). Coaches might require relaxation strategies to cope effectively with the pressure environments in which they find themselves or to enable them to be in the appropriate psychological state before competition so that they are able to communicate with their athletes, which is arguably a key element of coaching.

The final psychological skill briefly reviewed here is that of goal setting. In reviewing the early goal-setting literature, Gould (2001) reported it to be beneficial for changing important psychological states such as anxiety, motivation, and confidence, and more recently it has been suggested that multiple goal-setting strategies, comprising process, performance, and outcome goals, are beneficial to athlete performance (Filby, Maynard, & Graydon, 1999). In addition, despite none of the previous psychological skills having been considered from a coach

perspective, goal setting has received some limited attention, albeit from a different type of coach from that explored in the current study. In their study of high school coaches' perceptions of goal setting, Weinberg, Butt, and Knight (2001) questioned coaches not only on the goals that they set for their teams and performers but also on the goals they set for themselves. The findings revealed that although the coaches set goals for themselves in both training and competition contexts, they more often had to do with the team rather than their own performance. The types of goals that coaches set for both training and competition were also placed into three thematic areas including player related, personal development, and administrative goals. Furthermore, the findings also suggested that coaches typically set short-term process goals for themselves and performance- and outcome-related goals for their teams and athletes. Although Weinberg et al. examined some of the goal-setting processes employed by coaches, one must be aware that the sample was not operating at the elite level of sport, and limited information was provided on the location, time frame, and the goals that were set for their own purposes.

Although the four key psychological skills have been examined in athletes, as yet, little is known regarding the extent to which they are used by coaches for their own performance. As a result, the main aim of the study was to conduct an exploratory investigation of whether, where, when, and for what purposes coaches use the skills of imagery, self-talk, relaxation, and goal setting.

## Method

### Participants

A total of 13 professional coaches from the UK age 23–57 years ( $33.8 \pm 9.7$  years; mean  $\pm SD$ ) from a variety of sports were contacted and informed of the nature of the study. Coaches in the sample were from a variety of sports (golf, sailing, cricket, gymnastics, rugby, athletics, soccer, field hockey) that when put together cover a range of task demands (team and individual, subjective and objective, contact and noncontact, open and closed skilled, self- and externally paced). For inclusion in the study, and in accord with recommendations for data-rich individuals (e.g., Jones, Hanton, & Connaughton, 2007), we required coaches to have worked with elite-level athletes for a sustained period of time ( $8.18 \pm 5.4$  years; mean  $\pm SD$ ) and to have been or currently be employed by their respective governing bodies of sport or by professional clubs. Using Hanton, Fletcher, and Coughlan's (2005) definition of elite athletes, *elite coaches* were defined as "those who work with performers on a regular basis who are current national squad members and perform at the highest level in their sport (e.g., World Championships, Olympics)" (p. 1131). None of the participants in the study had participated at the elite level before their coaching careers, and the only structured exposure to psychological skills that they had experienced was via their coach-education courses in which the importance of psychology for performance (mainly, athlete performance) was presented. Having secured ethical clearance from the lead author's institution, written informed consent was obtained, and participants were assured of their anonymity before any data collection.

## Interview Guide

Having reviewed the procedures employed in previous studies that have investigated psychological-skill use in athletes, we developed an interview guide. Two pilot interviews were conducted with two elite coaches, and minor amendments to the questions were made to the appropriateness of the probe and elaboration questions. The final interview guide contained six sections. The first section contained demographic information and other introductory comments. The second through fifth sections followed the same procedures but were focused on either self-talk, imagery, relaxation, or goal setting. In each of the sections, participants received a definition of the psychological skill under investigation and were then asked to explain their use of the skill, if at all, in both training and competition. In each environment, questions were used regarding when and why the skills were employed. Having covered the four psychological skills, the sixth and final section of the interview provided the opportunity for any final comments and summary questions from both the interviewer and interviewee.

## Data Collection

One week before being interviewed, participants were sent a copy of the interview guide in which they were required to consider what some of their responses would be. A structured-interview approach using open-ended questions was adopted for the interviews, and the questions presented to the participants were identical and asked in a similar manner. Although there was a structure to the interviews, the order of the questions varied depending on the responses from each participant and the manner in which the issues raised were explored by the interviewer (Patton, 2002). From adopting this approach, the detail in the participants' responses was maintained while also ensuring that the systematic procedure was retained. Despite the varying content of the discussions, a variety of probe ("So why was it that [the psychological skill] was employed in that situation?") and elaboration ("Could you explain [the reasons for its use] in more detail please?") questions were employed to ensure that all issues were investigated in depth. All interviews were conducted face to face in an environment comfortable for the participant. Interviews were also tape-recorded in their entirety (lasting no longer than 60 min) and transcribed verbatim, producing a total of 107 single-spaced typed pages.

## Analysis

Following transcription of the interview, we embarked on a predominantly deductive content-analysis approach. After the first and second researchers read and reread all of the interview text, they independently identified and coded words, phrases, quotes, and sayings for each of the psychological skills in accord with the recommendations of Côté, Salmela, Baria, and Russell (1993). Having met to agree that the raw data were discussed in the context of each psychological skill, they then independently unitized raw-data themes expressed by the participants into a set of common topics. Having established the units to which the raw-data themes were best suited, they located them into categories relating to the predetermined locations in which they were employed (training, competition) and the predetermined timing of their use (e.g., before, during, after). Having worked through this process, the researchers

were then able to track the purposes for which the preselected psychological skills were used across location and time points. At each stage of the analysis, triangular consensus between the first two researchers and a third researcher, who was not involved in the data collection or initial analysis of data and who acted in the capacity of a “critical friend” (Faulkner & Sparkes, 1999), was employed.

## Results

The following section provides information on the location, time frame, and purpose for using self-talk, imagery, relaxation, and goal setting. To enhance the explanation, the discussion of each psychological skill includes verbatim quotations to support and clarify the narrative.

### Self-Talk

The interviews revealed that all coaches employ some form of self-talk in their coaching roles. Furthermore, coaches made reference to their use of self-talk before, during, and after both training and competition whereby a degree of similarity was reported for the purpose of using it at each time frame across the two locations. For example, one of the most frequently cited uses of self-talk before both training and competition was to help control emotions, as illustrated in the following quote relating to training in rugby union:

There are times when I am getting ready for training and I think back to the last performance which obviously is sometimes good and other times bad, but I try and talk to myself to make sure that I keep myself in check. . . . I don't want to get carried away or be too harsh at the start of the session so I try to keep controlled before the session to make sure that the start of the session is spot on.

Self-talk was also reported to be used to help control emotions in competition, as illustrated in the following quote from a field hockey coach:

It gets quite tense at times, especially before a big one. . . . I find myself just telling myself that it will be OK and that I have got the right stuff across to them and I try to tell myself to keep calm and in control of myself.

A further common use of self-talk before both training and competition was regarding highlighting key coaching points, whereby one coach focusing on competition in cricket commented,

I talk to myself, just keep saying, “Keep it simple, keep it simple.” I suppose to make sure that I get the right stuff across. . . . I will practice sometimes what I am going to say so that the important stuff comes out. . . . The last thing I want is for them to be flooded with my talk when they go out there.

Other reasons reported for using self-talk before both training and competition were to get into the correct frame of mind, to boost confidence, to help rational thinking, to help relaxation, and to benefit motivation. Specific uses of self-talk

before training included to acknowledge that athletes learn at different rates, to help plan the session, to benefit motivation, and to help prepare for the session. Specific uses of self-talk before competition included putting across appropriate body language, preparing for precompetition talk, and preparing themselves for competition.

Like the “before” time frame, there were also a number of reasons that self-talk was used during training and competition. These included facilitating appropriate focus and backing judgments. A further purpose of using self-talk across both environments was to put across the correct body language, whereby a coach talking in reference to competition in gymnastics stated,

There are times when I feel myself going and I just tell myself to come on and look OK for them; it's like when all around is crumbling but you say, everything is fine, you've just got to carry on and don't give too much away. . . . They see me on the side and they need to see that you believe in them and they can see it in what you look like.

Self-talk was also used in a number of specific ways during training or competition. For example, it was used during training to work through strategies and to keep things simple for athletes in addition to enabling them to cope with difficult sessions. In this case, a soccer coach commented,

I suppose there are the good sessions that just happen but then there are the real problem ones, where nothing goes right. . . . I find myself just telling myself that things will come together and that they will get it and it will be OK but it is a real challenge to cope with the rubbish that has to go beforehand.

Similarly, self-talk was also employed during training by most coaches to maintain motivation at the end of a session. This is illustrated by a cricket coach who stated,

I try to look at it as though it is my last day in coaching. You can get stale and question what you are doing, especially when you get tired, you get tired and low on motivation. . . . Often players will want a certain amount of practice which you know isn't gonna do them much good, but if it makes them feel better you've almost gotta go and do it for them, so I tell myself to keep going and that it is gonna make a difference to them. . . . It makes me do the job properly and makes me make the end of the session as good as the start.

Self-talk was also used for specific purposes during competition, such as to prepare the in-competition talk, to get into the correct frame of mind, to boost confidence, to help rational thinking, to cope with tough situations, to help relaxation, and, finally, to help control emotions. For example, a very esteemed soccer coach commented,

I know that I become a bit of a wreck during a game, I am the typical roller-coaster. . . . I try to tell myself to keep in check and make sure that my emotions don't boil over. . . . Other times though I need to get my emotions going to let the guys know that business is required.

Self-talk was also employed after training and competition sessions by coaches, whereby a common theme across both settings was to evaluate what had just occurred. This is outlined in the following comment in which a cricket coach was discussing the purpose of self-talk following training:

I talk to myself quite a lot, just chit chat when I reflect and think about the session. . . . I try to tell myself what was good and what was not so good and how it fits together with the matches and other training sessions. . . . I suppose it gives me an end point but also something to refer to when we move to the next level.

Self-talk was also used in a specific manner after competition to prepare for the next training session and to prepare for the postcompetition talk. This is summarized in the following thoughts from a golf coach:

I'm not a big one for going straight in and talking. I like to think about what I am gonna say. . . . I run through it first when I can so that it comes out right. . . . The talk can be quite delicate so it has to be right.

## Imagery

Eleven coaches commented on their use of imagery in their varying roles. As in the case of self-talk, there were a number of reasons that imagery was employed by the coaches before, during, and after training and competition. There were several purposes for using imagery before training and competition that were consistent, and these included foreseeing difficulties that might occur. A sailing coach commented,

I spend some time outside before the day really kicks off just imaging what could go on. . . . I take in the varying environmental things that they might have to contend with and then think of the course and how the two [might] come together. . . . This gives me an idea of what might happen and how it could happen and what it might then mean for them . . . then I try to imagine what the best response for it would be and how they can be prepared for it.

Additional purposes for using imagery before both settings were to see how difficulties would be overcome, to facilitate appropriate focus, to help relaxation, and to help control emotions. Specific uses of imagery before training were to see the appropriate technique, to see how the skills fit into the bigger picture, to familiarize [themselves] with the environment, to give confidence that information was right, to give belief that the session was appropriate, to benefit motivation, to help plan the session, and to see the development of the session. With reference to the penultimate purpose, the following quotation from a cricket coach suggests why imagery is beneficial:

I try to think back to what has happened in the last session or game and work out what is needed and how I can make it happen. We have a plan and I have already visualized what it is before the session.

In relation to the development of the training session, the following extract from an athletics coach provides some context:

The initial stage of the imagery is the planning, visualize what's going on, how we are going to work, why the skills are important, and how it will lead to the next little session. . . . I then try to visualize how it will fit together with the rest of the session to make sure it goes smoothly and the guys can see why we are doing it.

There were also specific purposes for employing imagery before competition that included to highlight key coaching points, to put across correct body language, to benefit instructions to performers, to plan the warm-up, to picture the venue, to recreate what the athlete might experience, and to help prepare the precompetition talk.

A number of similarities relating to the purposes of using imagery during training and competition were also reported. These included the need to facilitate appropriate focus, to help relaxation, and to help control emotions. There were also a number of specific purposes for using imagery during training that included seeing the appropriate technique, giving confidence that information is right, and facilitating verbalizing coaching points. A sailing coach commented,

Visualization is critical because it's visualizing the skill that enables me to translate it into words that I can get across to them. I tend to employ a lot of different stimuli to how I visualize, whether it's sounds, or feelings, it's kinesthetic and visualizing each skill in detail and then being able to translate it into coaching points for them. I picture a skill and picture what's difficult about that skill, what I'm trying to get across, and then I will come up with an exercise that recreates that or gets the best out of that particular incident.

As with training, there were a number of specific purposes to imagery being employed during competition. For example, imagery was used to put across correct body language, to benefit instructions to performers, to help prepare for the in-competition talk, to help prepare for the postcompetition talk, and to get away from the pressure. The purpose of using imagery to escape from pressure is summarized in the following quotation from a gymnastics coach:

There are always difficult times in a game so I just try to escape. . . . I know there are faces watching me, but I try not to see them. I take myself away . . . it isn't for long, just when I feel the pressure pinching me a bit. . . . I don't think the guys realize to be honest; it is just a little release for me to help get me through.

Several coaches also commented on their use of imagery after training and competition. The only purpose for posteveht imagery use was to benefit evaluation, whereby the following comments from track and field and golf, respectively, provide an illustration how imagery was used in both training and competition environments:

I always review the sessions. I go back to what I thought was going to happen and what I had set out in my head and then I go through the session and see

what was done, what wasn't, and why. . . . It gives me some perspective on where I was and where they were at the session and what we achieved. . . . I tend to do it quite soon after the session so that it is fresh, but I am aware that others, if they do it, may do it later.

I use it to evaluate what has happened so that I can feed it back or store it for training. I try to run through a couple of good and bad things so that it is equal. . . . Very rarely is it all one or the other, but it gives me a sense for what has happened, and that helps me with my initial evaluation.

## Relaxation

Although relaxation was employed in both training and competition environments, there was a marked reduction in the number of coaches (6) and purposes relating to its use. In addition, unlike the previous two skills, there were no crossovers between the purposes of relaxation used across the two environments at any time point. Although not reported as being employed before training, relaxation was used before competition to put across the correct body language, to slow everything down, to calm everything down, to give control, and to help rational thinking. An additional reason that relaxation was employed before competition was to benefit communication. A track-and-field coach said, "I generally feel that when I'm relaxed I communicate so much better, so I make sure that I take some deep breaths or at least try to so I am relaxed before communicating with an athlete."

There were limited references to the use of relaxation during training, although none of the purposes were similar to those reported for during competition. For training, relaxation was used to help communication, to put across appropriate body language, to cope with individuals not improving, and, finally, to cope with poor sessions. A hockey coach commented,

Obviously there are the sessions which just fall flat and achieve nothing; they are hard ones to keep going on because it feels like there are so many things to battle against, one of which is me so I have to relax myself or I would just explode. . . . I just take a step out of the box and get some air through me to keep me going.

Relaxation was used during competition to "not let athletes see me tense," whereby one participant commented, "The last thing you want is for your athletes to see you tense. . . . I use breathing exercises to help me reduce tension so that hopefully they don't pick up on when I am tense." Other purposes were to put across a confident persona, to help rational thinking, to reduce the pressure, and finally to enhance the control of decisions, whereby a rugby-union coach said,

It's sort of an intense relaxation but I have to make so many decisions that I know that when I am not in that state my calls to the guys can be wrong. . . . I need to get into that relaxed state to get those decisions right [because] I know that my reading of the game is good.

Although there were no references to relaxation being employed after training, coaches did make some comments relating to its use after competition. Here, the

sole purpose of its use was to enable effective communication with their athletes. This reinforces the quote previously cited regarding the use of relaxation to enhance communication before competitive performance.

## Goal Setting

Goal setting, although employed in training and competitive environments, was the least employed skill, with only 5 coaches citing its use. Coaches reported purposes of goal setting to be benefiting communication, aiding organization, and providing aspirational standards for themselves before training and competition. In addition, further purposes for using goal setting before training were to help focus for the session, to help visualize aims, and to give motivation for the session. The latter reason is explained in more detail in the following comment by a cricket coach:

Some of the sessions get a little dry and go on a bit, but that's where my goals really work. I think back to what I set, maybe to work on communication or a different type of delivery, or even to be more direct in my coaching style. . . . That kind of stuff keeps me motivated throughout.

Goal setting was also employed by coaches to help get into the appropriate frame of mind before a competition. Coaches also reported using goal setting during training and competition. For training, the purpose of its use was to be able to cope with difficult sessions and to help control emotions, and for competition its purpose was to facilitate appropriate focus. There were no reports relating to the use of goal setting after either location.

In addition to training and competition, coaches also reported setting goals in private environments. Typically, coaches reported setting longitudinal (season-long) goals that related to their performance with the athletes (e.g., to aid general organization, to set standards for the year for themselves and the athletes, to give direction to the sessions, and to ensure appropriate content delivery) and annual goals for themselves whereby the purposes were to aid personal development and to ensure personal motivation. Thus, a sailing coach stated,

I think I know where I want to go as a coach, but I think they are sort of longer-term goals. . . . But I certainly have those longer term goals; I know where I want to go within the club, where I want to go outside of the club long-term, and my goals reflect that. I think that this is really important and I make sure that I do it each year and record where I want to go and how I am doing it. . . . If I don't know those details then my work seems pretty pointless.

## Discussion

The current study set out to explore whether coaches use the skills of self-talk, imagery, relaxation, and goal setting, and it sought to gain an insight to where, when, and for what purposes they use them. The coaches in the current study all employed some form of psychological skills, with many of them tending to employ self-talk and imagery compared with relaxation and goal setting. The coaches also suggested that although the skills have specific purposes for their use for each time

frame (before, during, and after) and location (training and competition), there were also consistent purposes for using them for each time frame across locations.

When evaluating the results, one could argue that the increased reporting and purposes for using self-talk and imagery are not surprising given that both skills enable individuals to interpret feelings and perceptions, regulate and change their evaluations, and give themselves instructions and reinforcement. As such, the findings proposed that coaches use self-talk to overcome concerns in performance, possibly when they need to control their emotions (feelings); to help plan sessions and pre-, in-, and postcompetition talks (perceptions); to enable rational thinking (regulate and change evaluations); to get themselves into an appropriate frame of mind (instructions); and to back their judgments or give themselves confidence (reinforcement). Similarly, coaches reported the purposes for using imagery to be for storing images to recreate experiences, for example, to develop sessions, to imagine the appropriate technique, to control emotions, to develop confidence in what they deliver, and to verbalize coaching points.

The findings relating to relaxation are more complex in that a marked reduction was seen in the number of purposes for which coaches used relaxation compared with self-talk and imagery and with those reported commonly being associated with competition. This finding could be explained by a number of possible factors. First, relaxation skills were defined in the form of breathing exercises, which fails to represent the full range of relaxation-based strategies advocated by practitioners. This might also explain why relaxation strategies appeared to used more in competition environments, in which coaches would have to be proficient in their use of portable on-site skills (cf. Maynard et al., 1995). Second, the number of purposes for its use might also be low because of several coaches citing both self-talk and imagery to be employed to enable relaxation, and as such they did not require relaxation skills in their own right.

The findings for goal setting can be discussed in relation to the work of Weinberg et al. (2001), although the types of coaches employed across the two studies were contrasting. In the current study, participants were required to discuss the goals that they set for themselves, which meant that there was a limited focus on team- or athlete-related goals. This might explain why only 5 coaches cited goal-setting activities for themselves, with the remainder possibly setting goals through the team or athlete, as did many of the coaches in the Weinberg et al. study. Thus, the findings reported in the current study might not fully reflect the scope of goals that coaches set even though a combination of personal-development and administrative goals were reported. Despite the obvious differences in the key aims of the current study compared with that of Weinberg et al., there were many similarities reported in the findings that together provide useful information regarding the relatively lower employment of goal setting among the coaches.

Although there appears to be an element of variability in the employment of the four selected psychological skills, the findings clearly indicate that coaches use the skills in varying locations, at a number of times, for a number of reasons. Furthermore, although specific purposes for using some of the skills in each location and time point were reported, there were a number that were consistent across locations and times. Thus, from that perspective the study served its exploratory purpose, although there are a number of potentially limiting issues within the study that require addressing before confirmation of the findings. The first issue

is the sample in terms of participant recruitment and sample size. Regarding the recruitment of participants, we acknowledge that the only criterion for inclusion in the study was for the coaches to be "elite." As such, given the lack of purposeful sampling employed, it might have been that the participants were not as information rich as they could have been had a more focused recruitment process been adopted (see Patton, 2002). In terms of the sample size, it is widely accepted that when small samples are employed (in this case, 13 coaches), the generalizability of the findings to the wider population is limited. As such, given the qualitative method of investigation, researchers might wish to take the findings reported here to establish a quantitative method for examining a wider cohort among the coaching population.

A second issue relates to the analysis of data with respect to sport type. Although it was not considered in the current study, one could argue that psychological-skill use might depend on the type of sport in question (team vs. individual) in terms of how the skills are employed. For example, the organization of training sessions for larger groups compared with individuals brings with it a number of potential issues, which might require the use of not only different psychological skills but also skills that are employed in sport-specific ways. Furthermore, one could argue that there might be intersport variance within the broader categories of team and individual. This is something that has already been established in the athlete literature (e.g., Taylor, 1995; Thelwell et al., 2006) as being something for practitioners to consider.

A third area for consideration is the degree to which the psychological skills were effective for coach performance. With the current data, we are not able to infer that coaches who use psychological skills are better able to cope with the performance demands that they face. Although the skills–performance link is acknowledged in the athlete literature, we contend that before understanding such links in the coaches, we needed to examine whether psychological-skill use is evident, where and when the skills are used, and for what purposes. With preliminary evidence documenting the employment of skills, the challenge for researchers now is to establish the degree to which psychological skills are effective.

A fourth and final area worthy of attention is that the current study employed a seemingly narrow focus by addressing only four preselected psychological skills. Despite a rationale for the selected skills being provided, one must be aware that there are more skills and strategies that coaches might employ in addition to those focused on here. For example, in their development of the TOPS, Thomas et al. (1999) identified strategies such as automaticity, emotional control, and activation in addition to the more common skills, which quite plausibly might be used by coaches.

With the current study being qualitative in nature, it would be inappropriate to draw firm conclusions from the findings. There are, however, a number of potential applied issues that might be of interest to practitioners. The first consideration is the practitioner being required to establish what type of psychological skills are possessed by the coach and what skills are required across the varying times and locations. This appears pertinent given the widespread purposes for using the skills reported in the current study. In addition, having established the requirements of the coaches with whom they work, practitioners then might wish to consider developing specific interventions for each coach. As such, given that there were a number of

times and locations at which the purposes for using the skills were mirrored across skills, it might be that multimodal interventions are developed. For example, before competition a number of skills were employed by coaches as a means to prepare for their precompetition talk (self-talk and imagery) or to generally help communication (relaxation and goal setting). Similarly, during competition, self-talk, imagery, and goal setting were cited as being used to facilitate appropriate focus. Such findings reinforce the need to profile the skills possessed and required by coaches to ensure that any ensuing intervention is appropriate to their specific needs.

In summary, the purpose of the current study was to explore whether coaches employ psychological skills, where they use them, when they use them, and for what purposes they use them. The coaches reported a more frequent use and greater number of purposes for using self-talk and imagery than relaxation and goal setting. In addition, despite there being specific purposes for using each skill in training and competition for each time point, there were several purposes of use reported for each time point that were consistent across locations.

## Acknowledgments

This research was supported by a Small Research Grant (SG-43594) from the British Academy to whom we extend our thanks for their assistance.

## References

- Bowes, I., & Jones, R.L. (2006). Working at the edge of chaos: Understanding coaching as a complex, interpersonal system. *The Sport Psychologist, 20*, 235–245.
- Callow, N., & Hardy, L. (2001). Types of imagery associated with sport confidence in netball players of varying skill levels. *Journal of Applied Sport Psychology, 13*, 1–17.
- Côté, J., Salmela, J.H., Baria, A., & Russell, S.J. (1993). Organizing and interpreting unstructured qualitative data. *The Sport Psychologist, 7*, 127–137.
- Dagrou, E., Gauvin, L., & Halliwell, W. (1992). Effects of positive, negative, and neutral self-talk on motor performance. *Canadian Journal of Sport Sciences, 17*, 145–147.
- Evans, L., Jones, L., & Mullen, R. (2004). An imagery intervention during the competitive season with an elite rugby union player. *The Sport Psychologist, 18*, 252–271.
- Faulkner, G., & Sparkes, A. (1999). Exercise as therapy for schizophrenia: An ethnographic study. *Journal of Sport and Exercise Psychology, 21*, 52–69.
- Filby, W.C.D., Maynard, I.W., & Graydon, J.K. (1999). The effect of multiple goal strategies on performance outcomes in training and competition. *Journal of Applied Sport Psychology, 11*, 230–246.
- Fletcher, D., & Hanton, S. (2001). The relationship between psychological skill usage and competitive anxiety responses. *Psychology of Sport and Exercise, 2*, 89–101.
- Frey, M., Laguna, P.L., & Ravizza, K. (2003). Collegiate athletes' mental skill use and perceptions of success: An exploration of the practice and competition settings. *Journal of Applied Sport Psychology, 15*, 115–128.
- Gould, D. (2001). Goal setting for peak performance. In J.M. Williams (Ed.), *Applied sport psychology: Personal growth to peak performance*. Mountain View, CA: Mayfield.
- Gould, D., Greenleaf, C., Chung, Y., & Guinan, D. (2002). A survey of U.S. Atlanta and Nagano Olympians: Factors influencing performance. *Research Quarterly for Exercise and Sport, 73*, 175–186.
- Gould, D., Greenleaf, C., & Dieffenbach, K. (2001). Pursuing performance excellence: Lessons learned from Olympic athletes and coaches. *Journal of Excellence, 4*, 21–43.

- Gould, D., Greenleaf, C., Guinan, D., & Chung, Y. (2002). A survey of U.S. Olympic coaches: Variables perceived to have influenced athlete performances and coach effectiveness. *The Sport Psychologist*, 16, 229–250.
- Gould, D., Guinan, D., Greenleaf, C., Medbury, R., & Peterson, K. (1999). Factors affecting Olympic performance: Perceptions of athletes and coaches from more or less successful teams. *The Sport Psychologist*, 13, 371–394.
- Hanton, S., Fletcher, D., & Coughlan, G. (2005). Stress in elite sport performers: A comparative study of competitive and organizational stressors. *Journal of Sports Sciences*, 23, 1129–1141.
- Hanton, S., & Jones, G. (1999). The effects of a multimodal intervention program on performers: II. Training the butterflies to fly in formation. *The Sport Psychologist*, 13, 22–41.
- Hardy, J. (2006). Speaking clearly: A critical review of the self-talk literature. *Psychology of Sport and Exercise*, 7, 81–97.
- Hardy, J., Gammie, K., & Hall, C. (2001). A descriptive study of athlete self-talk. *The Sport Psychologist*, 15, 306–318.
- Harwood, C., Cumming, J., & Fletcher, D. (2004). Motivational profiles and psychological skills use within elite youth sport. *Journal of Applied Sport Psychology*, 16, 318–332.
- Johnson, J.J.M., Hrycaiko, D.W., Johnson, G.V., & Halas, J.M. (2004). Self-talk and female youth soccer performance. *The Sport Psychologist*, 18, 44–59.
- Jones, G., Hanton, S., & Connaughton, D. (2007). A framework of mental toughness in the world's best performers. *The Sport Psychologist*, 21, 23–264.
- Martens, R. (1987). *Coaches guide to sport psychology*. Champaign, IL: Human Kinetics.
- Maynard, I.W., & Cotton, P. (1993). An investigation of two stress management techniques in a field setting. *The Sport Psychologist*, 7, 375–387.
- Maynard, I.W., Hemmings, B., & Warwick-Evans, L. (1995). The effects of somatic intervention strategy on competitive state anxiety in semi-professional soccer players. *The Sport Psychologist*, 9, 51–64.
- Morris, T., Spittle, M., & Watt, A.P. (2005). *Imagery in sport*. Champaign, IL: Human Kinetics.
- Munroe, K.J., Giacobbi, P.R., Hall, C., & Weinberg, R. (2000). The four Ws of imagery use: Where, when, why and what. *The Sport Psychologist*, 14, 119–137.
- Patton, M.Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage.
- Perkos, S., Theodorakis, Y., & Chroni, S. (2002). Enhancing performance and skill acquisition in novice basketball players with instructional self-talk. *The Sport Psychologist*, 16, 368–383.
- Rogerson, L.J., & Hrycaiko, D.W. (2002). Enhancing competitive performance of ice-hockey goaltenders using centering and self-talk. *Journal of Applied Sport Psychology*, 14, 14–26.
- Taylor, J. (1995). A conceptual model for integrating athletes' needs and sport demands in the development of competitive mental preparation strategies. *The Sport Psychologist*, 9, 339–357.
- Thelwell, R.C., Greenlees, I.A., & Weston, N.J.V. (2006). Using psychological skills training to develop soccer performance. *Journal of Applied Sport Psychology*, 18, 254–270.
- Thomas, P.R., Murphy, S.M., & Hardy, L. (1999). Test of performance strategies: Development and preliminary validation of a comprehensive measure of athletes' psychological skills. *Journal of Sports Sciences*, 17, 697–711.
- Van Raalte, J.L., Cornelius, A.E., Brewer, B.W., & Hatton, S.J. (2000). The antecedents and consequences of self-talk in competitive tennis. *Journal of Sport & Exercise Psychology*, 22, 345–356.

Voight, M., & Carroll, P. (2006). Applying sport psychology philosophies, principles and practices onto the gridiron: An interview with USC football coach Pete Carroll. *International Journal of Sports Science and Coaching*, 1, 321–331.

Weinberg, R., Butt, J., & Knight, B. (2001). High school coaches' perceptions of the process of goal setting. *The Sport Psychologist*, 15, 20–47.

*Revision received:* August 1, 2007

**Copyright of Sport Psychologist is the property of Human Kinetics Publishers, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.**