ABSTRACT
The manner in which golfers think on the golf course significantly influences their performance. In 2008, the author provided an overview of golf-specific mental skills with the intention of raising golf coaches’ awareness of psychological techniques they could use to help their golfers think more effectively. The aim of this paper is to follow up the author’s overview by providing an introduction to mental skills interventions, specifically focusing on how they can be tailored to individual golfer’s needs, and how they can be applied, analysed, and evaluated to facilitate the performance of competitive golfers. This five-part paper will: 1) outline the current state of formal mental skills education among golf coaches; 2) introduce selected theories that underpin mental skills interventions; 3) address the role of golf coaches in delivering these interventions; 4) suggest some frameworks which might help to increase the effectiveness of these interventions; and 5) illustrate the practical application of these theories and frameworks by describing a mental skills intervention that was used with a tour-level golfer to improve playing performance.

Key words: Coaching Education, Cognitive Behavioural Modification, Mental Skills Intervention, Sport Psychology

INTRODUCTION
The relationship between psychology and successful golf performance seems perpetual. This special connection has been recognised by both successful golf professionals [1-3] and academics who research golf performance [4-6]. More
recently golf coach education programmes [7, 8] have also supported the role of psychology within golf. However, given the contemporary nature of these programmes, many golf professionals have not received a formal education in golf psychology and therefore their application of psychological principles within golf coaching may be haphazard and unstructured [9]. The primary aim of this paper is to aid golf coaches in their application of psychological techniques by illustrating their use within a case study based on the author’s work with a tour-level golfer.

In 2008 Finn [10] offered golf coaches an overview of golf specific mental skills. A useful way to consider Finn’s overview is to frame it within the taxonomy of cognitive learning. Anderson and Krathwohl’s [11] taxonomy of cognitive learning classifies how we learn new information in the following six stages: 1) Remembering and the ability to recall information, such as recalling the different mental skills that golf coaches might use; 2) Understanding and explaining how different mental skills might help golf performance; 3) Applying and being able to discuss mental skills with clients and suggesting where mental skills might be able to help an individual’s golf performance; 4) Analysing and breaking down the specific components of individual mental skills to see how they function in a golfing context; 5) Evaluating and critiquing the impact mental skills have made on a client’s performance; and 6) Creating and being able to modify the application of mental skills as needed, tailoring unique mental skills interventions to individual clients.

This hierarchal model suggests that we learn in stages, conquering one stage before we can move onto the next. For example, in order to master the analysing stage we must also have first comprehended the remembering, understanding and applying stages. Although this is an over-simplified description of Anderson and Krathwohl’s model, it aims to highlight that, as a coach, you learn in stages, thus becoming proficient in an area such as mental skills training will take time and practice.

Finn’s overview aimed to fulfil stages 1 and 2 of Anderson and Krathwohl’s taxonomy; providing coaches with a knowledge of what mental skills consist of, and with an understanding of where and when different mental skills might be used within their coaching. A rational progression from Finn’s overview would be to help golf coaches progress their knowledge of mental skills up the taxonomy by providing further information on mental skills in golf.

The aim of the current article is to raise golf coaches’ awareness of how to use mental skills interventions to improve the performance of their clients, specifically detailing how to apply, analyse, evaluate and create these types of interventions. A case study, based on work with a tour-level player, will be used to highlight these dimensions of a golf-specific mental skills intervention.

**HOW CAN I USE MENTAL SKILLS TO IMPROVE THE PERFORMANCE OF MY CLIENTS? A CASE STUDY OF A TOUR-CALIBRE PLAYER**

The following case study is based on a sport psychologist’s work with a professional tour golfer, where a mental skills intervention was utilized to improve performance. After providing a brief overview of the case study, the paper will consider: i) selected psychological theories which underpin mental skills interventions, explaining why mental skills might help golfers to think more effectively; ii) the role of the golf coach
in delivering mental skills; iii) selected frameworks that might help to maximise the impact of mental skills interventions, and iv) a detailed account of a golf-specific case study, moving from initial contact with the golfer, through the intervention process, and finally to the outcomes of the intervention.

WHO IS THE GOLFER?
The identity of the golfer has been kept anonymous, so we’ll call him Bill. Bill was a 37-year-old PGA Professional playing full time on a professional tour. Bill felt his game lacked consistency and that he did not always perform as well as he knew he could. One bad shot was all it seemed to take for Bill’s good performances to quickly turn into bad performances. Bill felt that he could improve the mental aspect of his game and decided to approach a sport psychology consultant to investigate further.

The next three sections aim to answer questions which the author has often been asked by golf coaches when they have been considering the use of mental techniques with their own clients who were suffering from similar problems to Bill.

HOW WOULD A MENTAL SKILLS INTERVENTION HELP BILL OR MY CLIENT TO THINK MORE EFFECTIVELY ON THE GOLF COURSE?
How Bill thinks, as how any golfer thinks, will largely determine how he feels and behaves [12]. For example, if Bill thinks that he cannot successfully hole short putts under pressure he most likely won’t be able to. A fear of not being able to hole short putts is generally not innate, but something that has been learned through our own experiences, including watching or listening to others [12]. Psychologists have suggested that if we can learn maladaptive thoughts (e.g., ‘I always miss these important short putts) and behaviours (e.g., standing over the ball longer than you normally would do because you are anxious) which negatively impact on performance, we can also learn to modify these thoughts to enhance performance. A popular way to modify these thoughts has been termed Cognitive Behavioural Modification (CBM) [12, 13]. Mental skills such as imagery, self-talk, arousal regulation techniques and goal setting can be used to help modify our thoughts and behaviours. For example, imagine that you have to hole a short putt to win an important competition. You are feeling extremely anxious because the last time you were in this position you missed the hole, knocking the ball six feet past, and you subsequently missed your next putt. Consequently, your thoughts are driven by those images with your self-talk reminding you of what happened last time. Physically, your shoulders are tense and your arms become very stiff. In this situation, you could make use of specific mental skills to modify your maladaptive thoughts and behaviours. For example, you could change thoughts such as the negative images and self-talk that you might be experiencing into positive images and self-talk. Further, arousal regulation-based mental skills (e.g., relaxation techniques) could help to reduce maladaptive behaviours such as developing tension in your shoulders and arms. So when golfers are prone to experiencing maladaptive thoughts and behaviours in relation to their golf, CBM interventions, which are largely mental-skills based, can be used to modify and regulate more facilitative thoughts and behaviours.
CAN I DELIVER MENTAL SKILLS TO PLAYERS LIKE BILL IF I AM NOT A QUALIFIED PSYCHOLOGIST?

As CBM techniques are rooted within psychology, you would assume that in a sport setting sport psychologists would deliver these types of interventions. However, it is often the case that sport psychologists are not well placed to do this. Increasingly, coaches are developing and facilitating CBM interventions as it is felt that they are better placed to do so, although many will be supported by sport psychologists from a distance [14]. To facilitate this growing trend, many governing bodies now actively train their coaches to use mental skills within their coaching.

The use of the CBM approach and mental skills interventions has proven to be very popular and largely successful within sport [15, 16]. However some criticism has been levelled at the effectiveness of these types of interventions within sport psychology. It has been suggested that this style of intervention often only act as sticking plasters (or band aids) to athlete’s problems, sometimes only managing symptoms when deeper issues need to be considered [17]. For example, if your golfer is in a state of clinical depression due to problems in their personal life, it is highly unlikely that performance psychology-based interventions such as CBM will effectively resolve the bouts of concentration loss that may be resulting on the golf course. As the criticisms of CBM within sport psychology seem valid, it is important that these types of interventions are applied appropriately, and that if deeper psychological issues do need to be considered, coaches call in the appropriate professionals. An overriding aim of this article is to encourage coaches to use mental skills with their clients. However, it is not advocating that coaches act as psychologists, as this would jeopardizes ethical boundaries and some cases athlete’s mental well-being [18].

IF I WAS WORKING WITH BILL OR ONE OF MY OWN CLIENTS HOW COULD I MAXIMISE THE IMPACT OF THE CBM APPROACH AND MENTAL SKILLS INTERVENTIONS?

If a CBM approach to enhancing your golfer’s performance is deemed appropriate, there are several frameworks which can be employed to maximise intervention effectiveness. This article will provide an overview of the following three established frameworks, and then utilize these frameworks with the present case study of Bill: 1) Thomas’s [19] model of a seven-phase performance enhancement process; 2) Bull and Shambrook’s [20] considerations for adherence in psychological skills training; and 3) Deci and Ryan’s [21] social cognitive motivational theory of self-determination.

Thomas’s [19] model describes the seven general phases a practitioner (sport psychologist or a coach) might employ during a psychological intervention when working with an athlete or team of athletes, or in this case a golfer.

- **Phase 1 (Orientation)** concentrates on getting a feel for the type of help a client is looking for and how committed they are to improving their performance. For example, whether a golfer has a specific problem with their game or whether they just want you to help them raise their general awareness of mental skills training.
Phase 2 (Sport Analysis) focuses on gaining a deeper understanding of what it takes to compete in the sport you are working in. If you put yourself in the shoes of a sport psychologist, this phase is very applicable as many practitioners will work in sports that they have never competed in, or had any involvement in before. If this is the case, practitioners will need to develop an understanding of what athletes need to do to achieve and compete in this particular sport. A golfing equivalent might be that if you are a golf coach working with tour players, but you have never played or experienced tour golf before. Therefore, developing a deeper understanding of what it takes to compete on tour will be very important for this coach.

Phase 3 (Individual/Team Assessment) is the initial assessment stage where information such as questionnaires, interviews and performance data is gathered regarding an athlete’s current performance and where strengths and weaknesses might be. A practitioner’s approach to this phase is often very individual, with different practitioners using their own unique combination of measures.

Phase 4 (Conceptualization) combines what has been learned from phase 3 and therefore what needs to be done in phase 5. This phase will often entail going to the literature to develop a deeper understanding of your client’s problems.

Phase 5 (Psychological Skills Training) considers and introduces the skills and techniques which might help to improve your client’s performance. For example, if your client is suffering from anxiety on the first tee, arousal regulation techniques might be introduced.

Phase 6 (Implementation) considers the integration of the skills and techniques introduced in phase 5 into your client’s everyday training, and their performances.

Phase 7 (Evaluation) aims to evaluate your client’s adherence to the interventions which have been implemented, measure any performance impact the interventions have had, and understand any problems or difficulties your client might have faced.

Finally the model has a closed-loop function moving the practitioner from phase 7 back to phase 1 where they reassess the initially stated aims and objectives.

In summary, Thomas [19] proposes that the practitioner should consider the following phases: i) what does your client want from you? ii) what does your client need to perform in their chosen sport? iii) what does your client’s current performance look like? iv) which areas of your client’s current performance can be improved? v) which psychological skills might help your client to improve? vi) how can you implement these skills into their performance? vii) how can you evaluate the impact of the
intervention? and viii) does your client need to revisit these phases for further interventions?

Thomas’s [19] model provides a good general overview of how a practitioner might implement a CBM-based intervention. Although this model oversimplifies the process of an intervention and does have some limitations, it is recognised as a framework which is reflective of contemporary practice [22].

Thomas’s [19] model provides a good framework to work around, but used alone it will not maximise the effectiveness of your intervention. Two of the biggest barriers a practitioner will face when developing a successful intervention will be keeping the client motivated and ensuring intervention adherence.

When considering motivation, Deci and Ryan’s [21] social cognitive motivational theory of self-determination has recently been popular in sport psychology. To be self-determined is to be able to do what you chose to do, and free to make the choices you want to make. Self-determination theory suggests that you provide autonomy, competence and relatedness in order to maximise a self-determined mindset within your clients. To enable these three core components of self-determination you should consider the following behaviours suggested by Mageau and Vallerand [23]: don’t tell your client what to do; provide them with options and choices when developing interventions; value their thoughts and options; give them good positive feedback; if you are asking them to do things they don’t necessarily agree with, rationalise why you are asking them to do it; encourage them to focus on the improvements they are making on the small areas of their game that you are working on, and not how their overall game might currently compare with their peers.

In order to maximise adherence to mental skills interventions, Bull and Shambrook [20] suggested that practitioners should consider the following four strategies: i) working in partnership with the athlete to develop the intervention; ii) developing the intervention within a sound goal-setting framework in order to ensure a specific outcome target; iii) putting in place clear processes of measurement, achievement and evaluation; and iv) encouraging the athlete to use a diary to longitudinally reflect, record and evaluate the intervention.

Utilizing these three frameworks in combination within your intervention will help you to maximise intervention efficacy. Furthermore, these frameworks may also be useful in maximising the impact of other parts of your coaching practice.

**IF I WAS WORKING WITH BILL HOW COULD I IMPLEMENT AN EFFECTIVE MENTAL SKILLS INTERVENTION USING THE PREVIOUS THREE FRAMEWORKS?**

**PHASE 1 (ORIENTATION)**
Bill was a 37-year-old PGA Professional playing fulltime on a professional tour. Bill approached a sport psychology consultant as he was interested in improving the mental-skills aspect of his game. Bill indicated that he would like to pursue a one-to-one psychology-based intervention with the sport psychologist.

**PHASE 2 (SPORT ANALYSIS)**
The psychology consultant was comfortable with the sport of golf as he had played
the game for a considerable period of time. He had also worked closely with the Professional Golf Association of Great Britain and Ireland and clearly understood the key psychological principles which underpinned elite golf performance. In deciding whether developing the psychological elements of Bill’s game would be beneficial, the consultant considered two influential points: a) Bill was making a living playing on tour as a professional golfer, and b) several of Bill’s peers reported that he was a very talented golfer, but they felt he had never fulfilled his potential of playing golf at a higher level; i.e., the PGA European Tour. Based on this evidence, the consultant concluded that enhancing Bill’s psychological performance skills might be beneficial to his overall game, helping him to get closer to fulfilling his potential.

PHASE 3 (INDIVIDUAL/TEAM ASSESSMENT)
The assessment process took place over a three-week period. Several sources of data were collected allowing a triangulation effect, where the same variables are considered from three or more perspectives, reducing the potential bias that may occur when only limited data sources are referenced [24]. The data collected were as follows; self-report data from Bill in the form of a performance profile [25] (see appendix 1 for an example of a performance profile) and several semi-structured interviews; self-report data from Bill’s friends, playing partners and coach in the form of semi-structured interviews; the practitioner’s observations of Bill practicing and playing competitive golf; objective data in the form of Bill’s competitive golf statistics which he had collected over a period of time. Periodic reports combining subjective data, objective data, assessment of the problem(s), and plans for intervention (SOAP) were constructed throughout the data collection process [26]. This allowed the consultant to reflect on his interactions with the client and consolidate the multiple sources of data that were collected, thus bringing to the fore any important issues that emerged. Further measures that might be appropriate within the assessment phase, but were not used in the current intervention, are personality profiles and learning style inventories. Some of these types of assessment tools would facilitate the development of interventions that consider the underpinning motivations and behaviours of your client, and also their optimal learning style, helping you to build more effective interventions.

PHASE 4 (CONCEPTUALIZATION)
Several themes emerged once the data had been evaluated. It seemed that the weakest areas of Bill’s game were his fairway play and his putting. It was apparent that Bill changed the way he played these areas of his golf game on a regular basis. For example, he often changed the type and style of his golf equipment, his pre-shot routines (PSR) as he approached each shot, and the way he swung the golf club. This inconsistency in Bill’s game led to him being given the nickname, ‘The Tinker Man’ by other players and coaches, a nickname which Bill seemed to be fond of and wanted to live up to.

By contrast, the strongest area of Bill’s golf was his driving off the tee. In this area of his game, Bill used a consistent PSR prior to every shot and was confident in his swing. Self report, observational and performance data suggested he consistently hit fairways and greens from the tee. Bill did not tinker with this area of his game.
After hitting a shot that he perceived to be of unacceptable quality, Bill would engage in high levels of negative self-talk and physical gestures of dissatisfaction. A side effect of his negative mindset would often manifest in his next similar shot. Here Bill believed that he would become overly conscious of his golf swing technique, describing his ‘swing thoughts’, which seemed to be similar to the concept of swing keys [27], as being focused on the movements he needed to make to perform his swing. For example, Bill reported that he would consciously think about the mechanics of his golf swing as he hit the ball.

To summarize, it seemed that the major psychological problem with Bill’s game was that he did not display consistent behaviours on the golf course and was intolerant of any shot he believed to be inferior of his best. This did not necessarily reflect the finishing position of the shot, but the way the shot looked and felt. This frustration led to negative self-talk and body language. When Bill was unhappy with a particular shot, he would become upset which would result in him tweaking his PSR and consciously monitoring the mechanics of his swing on the next similar shot. When he was unhappy with a round, or sequential rounds, he would change a club. Bill seemed to justify his title as ‘The Tinker Man’.

It seemed Bill was in a vicious cycle which once entered was difficult to escape. He would hit what he perceived to be a bad shot because it didn’t look or feel as good as it could, getting angry at himself, and subsequently trying to change his swing which would lead to him hitting an even worse shot. Bill was unable to accept bad shots, consciously thinking about his swing on the next shot in order to try and improve his performance. He was in a negative downward spiral and he could not seem to get out of it.

Once the areas that were believed to be detrimental to Bill’s game had been identified, it was important to gain a clear understanding from the research literature of why these factors might be having a negative impact. Once these factors were clearly understood, a much more effective intervention could be developed.

DO GOLFERS ALWAYS NEED TO HIT PERFECT SHOTS?
Anecdotal reports from Ian Woosnam stated that he became a world-class player when he began to accept that he would hit four to five bad shots per round [28]. Qualitative research [29] found that during peak performance a sample of touring and club professional golfers were unconcerned by the negative consequences of poor shots. Furthermore data collected by Thomas and Over [6] suggested that the lower handicap golfers in their sample were less inclined to dwell on missed opportunities, past mistakes and other negative thoughts whilst performing in competitions.

Golfers may be frustrated by unsatisfactory shots as they are susceptible to cognitive biases during shot selection [30]. Human information processing is thought to be affected by a wide variety of cognitive biases [31]. Cognitive biases, which have also been termed positive illusions, have been suggested to manifest themselves in well-adjusted children and adults [31]. Individuals who indulge in positive illusions tend to overestimate their success in tasks which are important to them [32]. Bill may have therefore been overestimating his ability to hit every shot optimally and therefore suffering from the effects of positive illusions.
CAN NEGATIVE SELF-TALK BE DETRIMENTAL TO GOLF PERFORMANCE?

Negative self-talk is largely thought to be counter-productive during sporting performance due to the internal distractions it causes [33]. Specifically, negative self-talk can potentially have an adverse impact on anxiety, concentration, confidence and motivation [33, 34]. Research also suggests that negative self-talk and associated behaviours may have a positive impact on your opponent’s performance [35, 36].

CAN INSTRUCTIONAL SELF-TALK BE DETRIMENTAL TO GOLF PERFORMANCE?

Bill’s dissatisfaction with poor shots led him to engage in instructional self-talk [37], where his internal dialogue focused on the mechanics of his swing. It has been suggested that for someone of Bill’s high skill level the use of instructional self-talk, while swinging the club, would be detrimental to his swing mechanics, and therefore the quality of his shot [38]. This is based on the conscious processing hypothesis, which suggests that when a skill has become automatic, too much conscious thought about the mechanics of that skill will result in the skill breaking down. For example, many highly skilled golfers report that they have very few thoughts when swinging the golf club. This suggests their golf skills are automatic and, therefore, if they begin to think too much about making movements by using instructional self-talk, their golf skills will begin to breakdown.

CAN A CONSISTENT PSR HELP TO ENHANCE GOLF PERFORMANCE?

Within golf, a PSR can be thought of as the routine pattern of thoughts and behaviours used before and as a golfer hits the golf ball (for example see Table 1). Well-practiced and consistent PSRs are thought to have several advantages. Shaw [39] suggested that they facilitate good mental preparation, helping the golfer turn on concentration, focus in on the present shot, and displace previous negative shots. Further, the

<table>
<thead>
<tr>
<th>Behaviours</th>
<th>Thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Put your glove on</td>
<td>1. Self-talk – ‘turn concentration on’</td>
</tr>
<tr>
<td>2. Pace out to nearest yardage marker</td>
<td>2. Imagery – ‘start to see the types of shots you could play’</td>
</tr>
<tr>
<td>3. Select club and pick it out of your bag</td>
<td>3. Self-talk ‘stay in the present’</td>
</tr>
<tr>
<td>4. Stand behind the ball using your club to line up the target</td>
<td>4. Imagery – ‘see, feel and hear the shot you want to play and how you want the shot to behave when it lands’</td>
</tr>
<tr>
<td>5. Stand over the ball and set up</td>
<td>5. Self-talk – ‘take a nice slow deep breath feeling the air slowly fill up your belly as you breathe in through your nostrils, and feeling your shoulders sink as the tension is released. Then once your belly is full slowly release the air back out through your mouth’</td>
</tr>
<tr>
<td>6. The swing</td>
<td>6. Self-talk – ‘smooth’ or ‘1, 2, 3’ (striking the ball on 3). Imagery – ‘see the ball flight you want to achieve’</td>
</tr>
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WILL MECHANICAL THOUGHTS DURING MY SWING FACILITATE GOOD PERFORMANCE?
Consciously being aware of movements during a well-learned skill may lead to unravelling the automaticity of that skill [42, 43]. Within golf, there has been much indirect discussion of automaticity in the form of ‘trusting your swing’. The term trust, in this case, refers to the performance skill of releasing any conscious control over motor program execution; for golf, this means the ability to give up trying to control the swing mechanics during execution of the golf swing [44, 45]. Rotella [46] has discussed the role of players trusting their swings when they were performing exceptionally well, and were on what he termed a ‘hot streak’. Rotella reported that players did not think about the mechanics of their swings while hitting the ball when on hot streaks. Jenkins’ [27] research supported the idea that thinking about swing mechanics might be detrimental to competitive performance, suggesting that swing keys are used to fill the void between the continuum of thinking about swing mechanics and the seemingly impossible ‘thinking about nothing’. Most recently the work of Stevenson and colleagues on tee shots, pitch shots and putting highlighted the superior performance advantages for golfers who trusted their swing mechanics [44, 47].

WHAT DOES THE ANECDOTAL AND RESEARCH EVIDENCE SUGGEST ABOUT BILL’S PERFORMANCE?
After considering the literature, it seemed that the cognitions and behaviours which were debilitative to Bill’s performance were as follows: 1) the belief that he should always hit perfect shots; 2) becoming angry at himself when he hit bad shots; 3) not having consistent PSRs in his fairway and putting game; 4) consciously thinking about the mechanics of his swing while swinging. As illustrated in Figure 1, these four areas are interconnected: 1) as Bill believes that every shot must be perfect, he becomes frustrated when every shot is not perfect; 1-2) this frustration results in negative self-talk; 2-3) Bill’s negative self-talk and general dissatisfaction with his previous shot leads him to change his thoughts and behaviours during his PSR, making it inconsistent; 3-4) due the inconsistent nature and lack of automaticity in

Figure 1. Cognitions and Behaviours that Appeared to be Detrimental to Bill’s Golf Game
Bill’s PSR, and his lack of trust in his swing, he allows mechanical swing thoughts to occur; 4-1) these mechanical swing thoughts could result in dissatisfactory shots that are not perfect.

PHASE 5 (PSYCHOLOGICAL SKILLS TRAINING)
In phase 5, it is important that you reach a consensus with your client about the cognitions and behaviours which are deemed to be detrimental to their performance. This can be facilitated through raising the awareness of your client by educating them and using the information from phase 4. When an understanding between your client and yourself has been achieved, you can begin to consider which types of mental skills and interventions might facilitate positive change in their debilitating thoughts and actions.

In this case, both Bill and the practitioner agreed that they would aim to modify the following cognitions and behaviours (Figure 2): 1) belief that every shot must be perfect, to belief that not every shot will be perfect; 2) negative self-talk after a bad shot, to positive self-talk after a bad shot; 3) inconsistent PSRs in fairway and putting play, to consistent PSRs in fairway and putting play; 4) mechanical swing thoughts during swing, to no mechanical swing thoughts during the swing.

Figure 2. Bill’s Current Cognitions and Behaviours Modified Through Interventions to Desired Cognitions and Behaviours

SOME STEPS TO PROMOTE ADHERENCE AND SELF-DETERMINATION IN YOUR CLIENT
As you begin to work together with your client to select appropriate interventions, it is important that you consider the suggestions made to increase self-determination and adherence in the first part of the paper. For example, work in partnership with your client and also encourage them to keep a reflective diary of the intervention process [20]. Provide your client with choices regarding the interventions they may wish to pursue [23].

A further consideration might be that not all clients will be familiar with sport psychology techniques. If this is the case, it may be beneficial to introduce them to the potential benefits of using these techniques [48]. For example, emphasise the growth in the number of athletes using psychological skills to enhance performance...
and the success these athletes are experiencing [49, 50]. Localise the use of psychological skills in golf and give world-class examples of their use. For example, discuss peer-reviewed published articles [16, 51] and anecdotal reports from Tiger Woods and Ernie Els, two prominent golfers who publicise their use of psychology. It will also be important to explain that their proficiency in psychological skills will be reflected through the amount of time and practice which they afford to developing and learning those skills [33].

DEVELOPING THE FOUNDATIONS OF THE INTERVENTIONS

It was agreed by both Bill and the practitioner that the intervention would be comprised of two components. As illustrated in Figure 3, the first part of the intervention, Part A, would target Bill’s thoughts that every shot he hit needed to look and feel perfect. The second part of the intervention, Part B, would be directed at Bill’s negative self-talk, inconsistent PSRs and mechanical swing thoughts.

PART A

Both the practitioner and Bill felt that the education session, based on the material in phase 4 regarding not having to consistently hit perfect shots, had made a significant impact in modifying Bill’s thinking on this area. However, to further reinforce the educational sessions, the practitioner asked Bill to complete two further tasks. First, Bill was to attend a major tournament, which was being held close to Bill’s home in the near future, and monitor the number of imperfect shots that world-ranked players were hitting [52]. Secondly, Bill was asked to recall from his memory occasions when he and playing partners had hit bad shots, but still recorded good scores [52].

Bill and the practitioner also agreed that a golf-course coping strategy to manage Bill’s expectations of hitting perfect shots would be used. It was decided that a coping strategy called positive focusing [51] might be beneficial for Bill. Positive focusing combines both motivational general mastery imagery and motivational mastery self-talk [10]. The aim of positive focusing is to direct attention towards good and better shots and away from problematic and negative shots. Focusing on positive performance in sport has been suggested to facilitate better performance [53, 54].
PART B
As Bill’s cognitive and behavioural problems seemed to stem from hitting what he believed to be substandard shots, both Bill and the practitioner agreed that the PSR would be a good place to develop the second part of the intervention. Further, as PSRs generally only consider thoughts and behaviours prior to skill execution; i.e., the golf swing, it was also deemed important to consider the post-shot routine (Post-SR) where Bill’s self-talk was sometimes very negative.

In targeting Bill’s pre-shot and post-shot fairway and putting routines, it was hoped that consistency could be developed, mechanical swing thoughts could be reduced, and negative self-talk could be changed into positive self-talk. Based on the evidence presented in phase 4, it was agreed that this was the best way to proceed.

PSR DEVELOPMENT
The construction of PSRs is a very individual process. The practitioner provided Bill with some golf-specific PSR literature and supported him in the development of his fairway and putting routines. The practitioner asked Bill to strike a balance between both behavioural and cognitive PSR components (for example see Table 1). Bill was also encouraged to direct his attention to relevant stimuli during the routines and not focus on previous mistakes or his golf swing [39, 41]. Bill was advised on the roles imagery, self-talk, arousal regulation and goal-setting might play in his PSRs [10]. The consultant and Bill also used a video recorder to help Bill develop and learn the behavioural components of his PSRs. Primarily this technique was used to allow Bill to see his new routines from several different external perspectives, both immediately after recordings were made, and also at home in Bill’s own time. In addition to helping Bill to learn his new PSRs, it was also hoped that this technique would increase Bill’s confidence in using his new PSRs.

POST-SHOT ROUTINE DEVELOPMENT
As the Post-SR was specifically targeting negative self-talk, both the practitioner and Bill agreed that the use of a coping strategy to combat this would be beneficial. Bill agreed to introduce the four rules of React [51] into his Post-SR. React is based on motivational general mastery imagery and motivational mastery self-talk (see Finn [10]) and aims to reduce negative self-talk. The four rules of React are: i) use only positive verbal comments about your game and yourself; ii) defend yourself against negative comments from others; iii) keep your attributes adaptive (e.g., focus on external factors such as an unlucky bounce); and iv) use the 4-F technique to stay optimistic (see below).

The 4-F technique [51] would be used as another tool to help Bill react positively after hitting a bad shot: i) Fudge (an exclamation of dissatisfaction after hitting a bad shot); ii) Fix (redo the swing using a practice swing to correct the problem); iii) Forget (forget about the problematic shot, remembering nobody plays perfect golf); and iv) Focus (focus your attention on the next the shot in a positive manner).

It was agreed that Bill would use the four rules of React after every shot he hit during both practice and competition in order to make it a consistent part of his Post-SR.
PHASE 6 (IMPLEMENTATION)
Once the client has begun to learn the skills presented in phase 5, these skills can start to be integrated into the client’s practices and performances. When considering Bull and Shambrook’s [20] thoughts on adherence, it is important that a sound goal-setting framework is used as well as clear processes of measurement, achievement and evaluation. Further, during this important implementation process, it has been suggested that the practitioner contacts the client on a daily basis with a view to increasing adherence [55].

INTERVENTION A
Organisation. Positive Focusing was initially integrated into Bill’s game over a two-week period.

Expected Outcomes. Bill and the consultant set moderately difficult goals for him to attain [56]. The short-term goal for Positive Focusing was to record at least one good shot after each hole that Bill played in both game-specific practice and competition. The long-term goal for Positive Focusing was to be able to disregard all negative thoughts regarding his game while on the course and only concentrate on the positives.

Measurements. To enable positive focusing, Bill would ask himself after a shot “Did I hit that shot basically where I wanted it to go?” If the answer was “Yes,” then Bill agreed that he should consider it at least a ‘good shot’. Bill would make a note of at least one good shot after every hole. For example, if Bill had hit a good drive on the second hole, it was suggested that he mark down a D (drive) on his adapted scorecard (Figure 4) next to the second hole in the Pos Foc row. If he hit a good long putt on the first hole it was suggested that he mark down LP (long putt) next to the first hole on his adapted scorecard. The number of good shots he recorded should be equal to or greater than the number of holes he played. Percentages could also be calculated. Bill was then to imagine these good shots in between holes to replace any negative thought he may be having. A self-report diary was also used to record Bill’s positive thinking patterns and strategies [21].

INTERVENTION B
The organisation, expected outcomes, measures and evaluation processes of the React intervention in Bill’s Post-SR were almost identical to those used for the Positive Focus intervention. The only difference was that Bill used the Post-SR (React) column in the adapted scorecard to record his use of this strategy. This process for the implementation of the PSR is explained below:

Organisation. Once Bill had consolidated the behavioural and cognitive components of the fairway and putting PSRs that he wanted to use, we began to monitor their use.

Expected Outcomes. It was agreed that Bill’s short-term goal would be to implement and begin to use consistent and systematic PSRs in his fairway play and putting. Bill’s long term goal would be to use consistent PSRs before every shot he played, both during a round of golf and in the practice area when working on game-specific play.

Measurements. Bill would record every time he used a PSR on the adapted score
Figure 4. Adapted Score Card Used to Measure the Cognitive and Behavioural Interventions Used by Bill (based on [51])

<table>
<thead>
<tr>
<th>Hole</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<th>Positive Score Card</th>
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<tr>
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<td>334</td>
<td>502</td>
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<td>423</td>
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<td>394</td>
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<td>11</td>
<td>13</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>15</td>
<td></td>
<td>Pos Foc + React</td>
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<td>5</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>37</td>
<td>72</td>
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<tr>
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<td>322</td>
<td>243</td>
<td>422</td>
<td>148</td>
<td>356</td>
<td>268</td>
<td>363</td>
<td>454</td>
<td>240</td>
<td>2816</td>
<td>5451</td>
</tr>
</tbody>
</table>

N of FW greens hit from tee

Total N of Putts

N of greens hit from FW
card in the PSR column. The number of PSRs versus shots made per round could then be calculated to give a gross value and percentage of how often Bill was using the routines. A self-report diary of pre-shot routines would also be kept to record Bill’s thoughts on this area [21].

PHASE 7 (EVALUATION)
It was agreed between Bill and the practitioner that he should aim to achieve his short-term goals within a two-week period of the intervention being implemented, and his long-term goal within two months. The actual number and percentage of times Bill successfully used the Positive Focus, Post-SR and PSR strategies would be recorded on the adapted score card (Figure 4) every time he played a round of golf. These data would provide one measure of Bill’s progress.

A further evaluation measure would be Bill’s golf performance. Bill would use the adapted score card to record the number of putts, and the number of greens hit from the fairway per round. Bill’s diary and own thoughts on the intervention would also be an important component of the evaluation process.

CLOSED-LOOP FUNCTION
Once the intervention had been thoroughly evaluated, it would be clear if it had been successful or if further work needed to be done on these specific areas of Bill’s game. In the first instance – the intervention had been successful – Bill might decide to target another area of his game which he felt needed to be improved, beginning again at phase 1 of the model. In the second instance – the intervention had not been successful – Bill and the practitioner would have to re-evaluate why and move back into phase 1 of the model.

CONCLUSION
The way golfers think ultimately impacts their ability to perform on the golf course; therefore, the capability to improve the way that golfers think might be an important commodity for a golf coach. This paper used the case study of Bill as a genuine example of a mental-skills intervention to raise the awareness of golf coaches wishing to develop these types of interventions with their own clients.

If coaches want to use these types of interventions successfully, it is important that they: i) theoretically understand why and how mental skills help golfers to improve their performance; ii) have a repertoire of mental skills that they can successfully use with their client; iii) approach interventions systematically; and iv) consider their client’s motivational needs and levels of adherence when implementing interventions. In combination, these four attributes should help to develop mental skills interventions which have a positive impact on the way clients think and perform on the golf course.

It is important to recognize that mental skills interventions can be extremely complex. If you do wish to start applying, analysing, evaluating and creating mental skills interventions, you should begin by working in partnership with an experienced sport psychologist. This will not only further your understanding of these performance-enhancing techniques, but also maximise your abilities to make mental skills work in your coaching, ultimately helping your clients to think more effectively
on the golf course. Finally, it is hoped that the combined examples of the current article and Finn [10] will bring golf coaches a step closer to understanding and successfully implementing mental skills interventions with their own clients.

REFERENCES

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35. Greenlees, I., Bradley, A., Holder, T. and Thelwell, R., The Impact of Opponents’ Non-Verbal Behaviour on the First Impressions and Outcome Expectations of Table-Tennis Players, Psychology of Sport & Exercise, 2005, 6, 103-115.


# APPENDIX 1: EXAMPLE PERFORMANCE PROFILE

**Name:** Joe Bloggs  **Handicap:** +3  **Date:** 01/07/09

<table>
<thead>
<tr>
<th>Quality</th>
<th>Sub-Quality</th>
<th>Meaning</th>
<th>Current Rating</th>
<th>Short Term Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>Driving off the tee</td>
<td>I am confident that I will hit the area of fairway I want 90% of the time.</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Mid-fairway irons</td>
<td>The green generally looks pretty big from about 150-180yds in. I’m nearly always on.</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Chipping</td>
<td>My chipping has let me down in the past sixth months. On one or two occasions I have ended up off the other side of the green.</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Short Putting</td>
<td>I just don’t seem to be able to hole out when it matters. It used to be a strength, but now I find anything from 8ft to 4ft really difficult.</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Mental</td>
<td>Concentration</td>
<td>My focus during short putts and chips is often on my technique because I feel so tense.</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Confidence</td>
<td>My belief in my ability to hold short putts has almost gone.</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Motivation</td>
<td>I like getting out there and getting my practice in at least 4 times a week. However, I think I can sometimes improve on the quality.</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>I get really anxious when it come to short putts and chipping.</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Physical</td>
<td>Tension</td>
<td>I feel lots of tension in the top of my back shoulders and arms when I get anxious.</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Suppleness</td>
<td>I am aware I have really tight hamstrings, but I often forget or can’t be bothered to stretch them. However, I do realise this might cause me problems in the future.</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Stamina</td>
<td>I find it easy to get around 18 holes and even if I have to do 36 in the day, I don’t feel tired.</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>