Journal of Psychology and Behavior Studies
ISSN: 2753-2364
DOI: 10.32996/jpbs
Journal Homepage: www.al-kindipublisher.com/index.php/jpbs

JPBS
AL-KINDI CENTER FOR RESEARCH AND DEVELOPMENT

| RESEARCH ARTICLE

A Pre-performance Routine Intervention on Golf Putting Distraction and Loss of Attentional Control

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| ABSTRACT
A young elite golfer, Judith, is about to compete in her second year on the professional circuit. She perceived that her choking situation might be a result of debilitative anxiety, poor focus, low confidence, and a lack of perceived control. To prevent choking and improve her ability to focus during pre-performance, the author orients with the *Cognitive-behavioral Approach*, and employs the Cognitive-Behavioral Consultation Model throughout her intervention in different phases. The followup evaluation of the mental skills and the intervention effectiveness such as the Reflective Questioning and CSAI-2R questionnaire are also employed. It is implicated that the pre-performance routine intervention program can be generalized to a wilder scope of populations in sport with similar situations. Future research can consider tracking the player's performance and making relevant refinements for the intervention program.

| KEYWORDS

Distraction, attentional control, Cognitive-Behavioral Consultation Model, BASIC-ID, PPR intervention

| ARTICLE INFORMATION

ACCEPTED: 30 December 2022 **PUBLISHED:** 01 January 2023 **DOI:** 10.32996/jpbs.2023.3.1.1

1. Introduction

Judith, a young elite golfer is seeking strategies to prevent choking and improve her ability to focus during pre-performance. According to Kelly's (1955) *Personal Construct Theory*, one's experience of a situation might be formed by the constructs used to formulate the expectation rather than reality (To & Wong, 2020). Therefore, Judith's expectation should be managed according to her individual needs in the psychological contributors to her performance, and the task demands integrating intervention methods.

The needs analysis data and the evaluation feedback from Judith demonstrated the consistency between the psychological consultant's intentions for impact and Judith's pre-performance routine (PPR) intervention aiming to maintain a self-paced and attentional focused flow, and enhance putting performance. In addition, with the skilled intuition of the consultant and peer supervision, the overall intervention can be established scientifically underpinned with the theory orientation, needs analysis, issue conceptualization.

2. Participant

Judith (pseudonym), a 23-year-old British female golfer (handicap=3), has contacted the consultant during the off-season. Judith is seeking strategies to improve her ability to focus during pre-performance and is willing to accept the invitation of intervention. She is about to compete in her second year on the professional circuit. She perceived that her choking situation might be a result of debilitative anxiety, poor focus, low confidence, and a lack of perceived control.

Judith detailed her concerns for the initial stage of her pre-performance. The aspiration for concentration (i.e., attentional focus), and the alleviation of anxiety and choking, appeared central to her requirements. Although Judith has very consistent routines, she has not fostered consistent cognitive components to her PPR. Consequently, various deleterious thoughts emerge (e.g., negative self-talk, immersing in the past, hesitation and over-contemplation in the current dilemma). Moreover, her anxiety even heightens when the competition venues vary, or when the game is telecasted, and as the importance of the game increases (i.e., championship vs. regular-season game or rivalry games).

3. Program features

3.1 Theory orientation

The *Cognitive-behavioral Approach* argues that individuals' cognitive set or attitude can significantly affect their behaviors and emotional reactions. Numerous studies have demonstrated that the way an individual perceives a situation can alter their subsequent behavior (Hofmann et al., 2012). It is reasonable to assume that early social learning experiences lead individuals to develop generalized cognitive sets among various situations and social interactions, which somehow moderates their emotional and behavioral reactions (Goldfried, 1979, pp. 117-118). Factually, Bandura (1969) emphasizes both the importance of cognitive processes and self-control behaviors, and it is consistent with Ellis (1962) cognitive-behavioral orientation approach, which has long recognized the therapeutic effect of modifying inappropriate expectations and beliefs as a way for anxiety reduction.

Kendall and Hollon (2013) made a meta-analysis of cognitive-behavioral interventions efficacy (e.g., magnitude, stability, generality) and point out that albeit there are variances among intervention procedures, their efficacy outperforms alternative therapeutic approaches/models. For example, Kendall and Hollon (2013) deal with the use of cognitive-behavioral procedures for anxiety reduction and focus on training individuals to re-evaluate potentially frustrating events, so that they can view such events from a more realistic perspective.

Contemporary researchers have revealed that athletes' brains are somewhat different, partially due to the cognitive-behavioral aspects of deliberate practice in cognition and behavior. Cognitive-behavioral interventions may optimize mental performance and further fine-tune the landscape of the brain (Early & Grady, 2017). Therefore, cognitive-behavioral strategies are crucial to sport, as psychological strategies are demonstrated effective, and performers possess the capacities to equip with such cognitive-behavioral skills along the way (Leffingwell et al., 2007). The circumstances for cognitive-behavioral interventions are summarized in Table 1 (Luiselli & Reed, 2011, pp. 113, 115).

Table 1: Circumstances for cognitive-behavioral interventions (Early & Grady, 2017)

Learning skill, form, or technique
Developing concentration and focus
Increasing confidence
Increasing leadership abilities
Developing or terminating a career
Managing life stresses and life events
Rehabilitating an injury
Substance use
Aggression or anger management
Perfectionism
Eating disorders
Training compliance
Team cohesion
Communication
Time management

Therefore, the Cognitive-behavioral approach is used to enhance Judith's golf performance.

3.2 Model of practice - Cognitive-behavioral Consultation Model (CBCM)

Evidence suggests that a golfer and his support team (involving the coach, coordinator, psychologist or consultant) should work together over planning processes based on the CBCM (Meyers et al., 1996, pp. 240-241). As such, Davies et al. (2015) delineate that the CBCM espouses a collaborative approach with a focus on mental-skills training. Through CBCM, the team's decision-making process involves gathering, processing, integrating, and communicating information logically to arrive at task-relevant decisions. As such, appropriate recommendations can be proposed to improve the performers (Davies et al., 2015). The steps of CBCM include: 1. consultation orientation; 2. sport familiarization; 3. evaluation and assessment (i.e., needs analysis); 4. goal

identification (i.e., intention for impact and issue conceptualization); 5. group or individual intervention; 6. effectiveness evaluation; 7. reassessment of goals. So the CBCM is best-suited to guide the intervention in Judith's case.

3.3 Needs analysis

The objective of this section is to use a range of triangulation tools to diagnose Judith's psychological issues and identify the causal factors inducing her choking.

3.3.1 Retrospective self-report survey

Self-reported surveys are measures where participants are requested to report on their behaviors, values, perspectives, or intentions. Likert scale, Thur-stone scale, and semantic differential are commonly used self-report measures. Similarly, other aspects of interest to researchers (e.g., beliefs and retrospective behaviors) are also measured via self-reports (Lavrakas, 2008).

Saw et al. (2015) argue that monitoring performers' pre-performance facilitates the evaluation and adjustment of their practices to optimize their performance outcomes. Self-report measures (e.g., questionnaire/checklist and diary) are considered cost-effective to monitor a performer's response to practice/competition. For example, Gray and Watson (2007) summarize self-report affective measures (e.g., Moods States Profile, the Mood Adjective Checklist, Multiple Affect Adjective Checklist) and utilize MACL to investigate twelve participants' affections (e.g., anxiety, concentration, distress, scepticism, aggression) with a 4-point scale. Also, Arnold et al. (2016) reveal that a retrospective self-talk survey has become a dominant measure to study athletes' performance, and further compared the accuracy and impact between concurrent verbalization self-talk and retrospective self-talk among skilled golfers.

Therefore, the Retrospective Self-report Survey will also be employed to address Judith's case with a 10-point Likert scale. Also, some questions (e.g., the ever best and worst performances) are asked to further identify Judith's psychological characteristics of excellence and pre-performance mental preparation. See Appendix B.

3.3.2 Semi-structured interview

Seidman (2006) argue that a semi-structured interview helps to explore perspectives, values, and experiences on specific domains. Encompassing predetermined questions, a semi-structured interview facilitates researchers to capture intended information. Besides, it provides both the interviewer and interviewees with guidance on what to probe and gives room for expounding phenomenons (Stuckey, 2013). Thus, some insightful perceptions not figured out in previous studies, yet important to their research questions, might be identified (Vukojević, 2016). The semi-structured interview enhances data validity as the interviewer can delve into respondents' understanding and ask for clarification. For example, Cronin and Armour (2017) conducted 12 semi-structured interviews, which lasted 50-120min, to investigate the relationship between youth athletes' performance and coaching philosophies (n=4) from an interpretative phenomenological perspective. Also, to investigate the potential psychological and physiological effects of music use on semi-professional golfers' pre-performance and practice, Gabana et al. (2019) used the semi-structured interview to conduct ten interviews (n=10, female=5, M_{age}=22.9). Considering the above rationales and practitioners' practice in the sports domain, the semi-structured interview is deemed appropriate for analyzing Judith's problems.

The interview questions and related diagnosed issues of Judith's pre-performance are summarized in Table 2. The full transcript of Judith's interview is available in Appendix A.

Table 2: Interview questions and diagnosed issues of Judith's pre-performance

Interview questions	Diagnosed issues
Q1: Do you feel pressured?	Pressurized due to unrealistic expectations, which bring in a self-focused attitude, avoidance to accept occasional mistakes, evaluation apprehension (i.e., fear of negative evaluation), overload by the accumulation of demands.
Q2: When you feel pressured, can you focus on the task demands at hand?	Distraction (i.e., fears of failure and thoughts of previous poor shots) causing her to focus more on the outcomes rather than the processes/task-related cues required to perform.
Q3: So what emotions come up while you cannot focus on the putting?	Debilitative anxiety and induced perfectionism
Q4: Can you feel able to control your feelings or cope with the situations?	Loss of perceived control and cannot cope with choking.

3.3.3 CSAI-2R questionnaire

Competitive State Anxiety Inventory-2 (CSAI-2) is one of the most commonly utilized tools for evaluating the competitive state anxiety within sports psychology research (Lundqvist & Hassmén, 2005). Although the findings of performers' anxiety using the CSAI-2 have been mixed, it still constitutes a valid instrument and continues to be widely adopted in sports psychology. For example, Craft et al. (2003) conducted a meta-analysis of the relationship between state anxiety and sports performance. Subsequently, to increase the factorial validity of CSAI-2, a revised version (i.e., CSAI-2R) was proposed to be more psycho-metrical by researchers and practitioners for measuring competitive state anxiety in athletes (Lundqvist & Hassmén, 2005). In addition, the confirmatory factor analyses by Fernandes et al. (2013) attested that CSAI-2R provides evidence in favorable psycho-metrical properties for all response dimensions and therefore is a valid competitive-state anxiety measurement when it is used before competition. Judith's CASI-2R investigation result can be seen in Appendix C.

3.4 Assessment of diagnoses

3.4.1 Judith's BASIC-ID

Summing up the above triangulation diagnoses, the BASIC-ID (i.e., the acronym for seven modalities) (Lazarus, 1973) can be used to describe Judith's case. See Table 3.

Table 3: Summary of Judith's BASIC-ID

BASIC-ID Component	Assessment (Post-Diagnosis, Pre-intervention)
behavior	Judith is in good physical condition, which allows her to continue her practice or competition. And she is equipped with comprehensive golfing techniques according to her narration. However, she reported choking situations, particularly in crucial putting moments.
Affect	Judith hopes to fulfil her potential as a top-notched golfer and successfully get the Champion this year and does not want to disappoint her parents. Judith is experiencing a loss of control, anxiety, distraction, and distress by the choking. She hopes to come over her difficult emotions and achieve her goal in the golf world.
Sensations	Judith reported frequent pain in her twist and wrists, especially in important games. The twist and wrists are felt inflexible, which might be due to the pressure and physical freeze from her anxiety and over-tension.
Imagery	Judith only reported rare and inconsistent imagery or simulation in the pre-performance, which might be due to her inability to concentrate and keep self-paced. Sometimes Judith images the competition environment, the broadcast, the opponents, and the audience's gaze.
Cognition	Judith wanders around her ideas on lots of 'What ifs', and sometimes overthinking about the result, other than the task process. She has difficulty in understanding 'how could such choking happen time after time?' Other types of cognition are related to her concerns about being squeezed out from the elite team and the top tier ranking. Also, she cannot realize the importance of dependence and self-paced for an elite golfer.
Interpersonal	Due to Judith's immersion in golf and with no other family members nearby, the majority of Judith's social support comes from the coach, staff and other team members within the golf program. She realized that if the devastating under-performance happens, it will gradually enforce her to sideline from the game both physically and socially.
Drugs and biology	Judith has a good relationship with her physiotherapist, who is giving her constant support. Judith keeps a good diet routine and regular work-rest schedule, and she does not take any illicit drugs. Therefore, she maintains a healthy biological status.

3.4.2 Issue conceptualization

From the Needs Analysis section with triangulation methods to describe Judith's psychological situations, it can be seen that distraction and loss of attentional control appear most frequently in the triangulation investigations, inducing other cognitive issues (e.g., anxiety, distress, indecision, fear of failure, unrealistic expectations) and somatic issues (e.g., choking, time-dragging, painful physical sensation). According to the professional judgment of the consultant as well as the peer review, distraction and

loss of attentional control are the main issues that take precedence over Judith's other sub-issues. Should these two precedent issues solved, other sub-issues can be overcome subsequently. Such logic is justified by relevant studies. For instance, Banks (2015) researched on attentional focus in kayak sprinting disciplines with results that showed a significant effect size ($\eta_p 2$=.55). As such, he asserts that the external focus (i.e., task-focus) is superior to the internal self-focus in relevant movement mechanics (e.g., skill performance, retention and transfer), and it further relieves anxiety and fear of failure. Moreover, to explore the attentional control strategies in professional judo players and to assess how attentional focus influences performance effectiveness, Bahmani et al. (2019) investigated fourteen male judo players with the semi-structured interview and correlational analysis. Their research implicates that attentional control and automaticity work synergistically for successful skill execution and anxiety alleviation in expert performance.

Based on Martindale and Collins (2012)'s reflection-in-action research that strengthens practitioners' reasoning chain in the applied sports psychology, the Issue Conceptualization and Driven Implementation at the program-intervention level of support for Judith can be summarized. See Table 4.

Table 4: Issue Conceptualization and Driven Implementation at the 'Program-Intervention' Level of Support for Judith

Level	**Issue**	**Intention for Impact**	**Implementation**
program	Choking & Anxiety; Approaching career transition	Fostering confidence & self-paced skills; Alleviating anxiety and choking;	High level of scientific elaboration; Collaborative consultation
Intervention			
Pre-performance routine with Singer's (1986) Five-Step Strategy for Self-paced Skills	-Concentration wavering; -Not experiencing immersive sensations; -Depression; -Hesitation &Time-dragging	-Expression of upset and frustration; -Acceptance of occasional performance fluctuation; -Prevent likelihood of fear/anxiety -Transfer anxiety into motivation, attentional focus, immersive sensations, and positive attitude; -Re-education on 'less is more'; -Encourage flexible adaptation; -Regain confidence and concentration	-Provision comfort and genuine support; -Utilization of CBCM counselling skills; -Creation of realistic perspective; -Use of breathing and relaxation; -Rational self-talk (i.e., non-extreme, logical, instructional, and motivational self-talk); -Building up imagery and simulation

3.5 PPR Intervention Program

3.5.1 Definition and functionality of PPR

An integration of cognitive and behavioral strategies employed before the execution of motor skills are called pre-performance routines (PPR), which emphasizes two clear, whilst equally important components: task-related thoughts and task-related behaviors (Cotterill, 2011). The cognitive components of the PPR in golf may incorporate mental skills, such as picking a target, visualizing the routine of the ball to the target, perceiving the perfect shot, and using a cue or thought (e.g., dimples of a golf ball) to direct attention (Cohn et al., 1990).

A series of benefits to athletes were emphasized for the employment of PPR (Boutcher, 1992). Such benefits include: enhancing concentration by motivating athletes to focus their thoughts on the task-related cues, helping them to surmount a natural tendency to dwell on negative thoughts, enabling them to choose suitable pre-performance behaviors, preventing warm-up decrements and the contemplation on excessive attention to the mechanics of their intuitive skills (Cotterill, 2011).

3.5.2 Evidence of preventing choking performance using PPR

The study of Hill et al. (2011) attests that an intervention designed to relieve choking effectively minimizes the number of choking episodes perceived by professional golfers throughout a competitive season. These golfers recalled that choking situations were reduced as a consequence of their improved concentration, anxiety management, perceived control, and self-confidence. Furthermore, both studies by Lautenbach et al. (2015) and Mesagno et al. (2019) support the findings that using a PPR improves performance under pressure based on the distraction model of choking. Further, to mitigate the unexpected circumstances in the real competition environment, Yeemin et al. (2020) conducted 6-week interventions in both the experimental and competition settings (n=15, M_{age}=34.75, Handicap=10~30). The results showed that the driver club-head speed, driving accuracy and driving distance presented sound improvements, and the choking situations were minimized. Research on other sports such as bowling and basketball free-throw also demonstrated that PPR interventions can alleviate choking by preventing distraction and self-focus (Mesagno & Mullane-Grant, 2010).

3.5.3 Implementation of PPR intervention

The consultant aimed at developing individualized PPR based on a series of elements, including (a) task demands, (b) existing behaviors incorporating trained cognitive skills, (c) individual preferred mindset, and (d) expected outcomes. This approach was employed based on the recommendations proposed by Cotterill (2011) who explored PPR use and development in elite golfers.

In many cases, participants felt their 'switching on' cue signified the initial of their PPR (Cotterill, 2007). Participants consented that having a specific focus is important in facilitating them to execute a shot appropriately. Therefore, after realizing Judith's individualized factors, a PPR intervention based on *Singer's 5 Steps Model* will be established for her. Singer and Suwanthada (1986) decompose the Five-Step Strategy (FSS) into *Ready-Image-Focus-Execute-Evaluate*. Using ANOVA analyses after 48 trials in comparing the effects of the experiment group, preview group and control group of students, Singer et al. (1989) demonstrated the effectiveness of FSS in facilitating to acquire complicated self-paced cognitive skills. The general procedures of FSS can see Appendix D.

Considering the above, Judith's PPR intervention consists of breathing and relaxation, cognitive restructuring, imagery, and a holistic putting feel. The PPR intervention is summarized in Table 5. Additionally, the timeline and activity for her PPR intervention can refer to Table 6.

Table 5: PPR Intervention for Judith

PPR	Components of PPR	Component details
Ready	-Gather information; -Shot selection; -Deep breathing and relaxation; -Rational self-talk	-Move Into your stance; gather relevant information such as wind speed/direction, tee box size, location of hazards (e.g., bunker, wind, rough); -Stand behind tee, then draw a line from the target to the ball and pick an intermediate target (e.g., piece of grass, old tee, debris, dis-colouration in the grass); -Keep some motion moving for relaxation and look at the target; -Make deep breathing to make sure the minds do not jump; begin by thoroughly exhaling the air in your lungs; perform 2-3 deep breathing to relax and dispel anxiety; -Ask questions via rational self-talk during the above readiness (i.e., instructional, logical, motivational self-talk), e.g., *What does a good shot look like here?* (This could help avoid anxiety and negative thoughts such as *'Don't hit it into the bunker'*); *Does this putting need to curve right to left or the opposite? Hit it high or low? Will it need extra spin as the greens are firm? What's the speed I expect the ball to enter the hole? What's the wind/lie going? Any available options?*
Image	-Visualizing; -Simulation;	-Visualize the images. For example, if the shot requires a higher draw, you may feel the swing a little flatter than normal, feel your hands get closer to the body on the downswing, and the club path a little more in-to-out, with the hands finishing high. -Imagining an intermediary and final target to create the shot shape. Imagining the ball flight like a movie or using a coloured 'shot tracer' line. Imagining the sound, rhythm, and tempo of the shot, etc. -Be aware of not breaking the putting into pieces; just imagine a holistic putting feel.

Focus	-Attentional focus; -Task-relevant cues; -Trust your feeling/intuition/ choices	-Focus on a task-related external cue (e.g., dimples of a golf ball, the target, or the intended shape of shot) to keep distractions out; -Quiet Eye--final fixation before putting; -Allocate your attentional resources to adopt the correct focus and achieve a flow state; -Reaffirm the target, rehearse orchestration of movements
Execute	-Trigger the putting; -Keep practising	-Keep in mind your personal rhythm; try to match your tempo/rhythm to your personality and how you play golf; -Thought stopping (i.e., do not think about the act itself or possible outcome), just trigger the putting; -Practice in routine offers a sensation of familiarity and calm and becomes part of the performer.
Evaluate	-Assess the outcome; -Make appropriate adjustments; -Further practice;	-Assess the outcome and identify discrepancies to rectify for the next putting; -Don't try to be perfectionism; just keep the large 'chunks' in mind as you're defining and refining you're own; -Just enjoy the PPR and further practice/rehearse it on the range, in your backyard, in task simulators; -Collaborate with coach & consultant in a collaborative/shared-mental approach; -NOTE: if distracted at any moment within the routine, then return to the IMAGERY stage.

Task simulators can also be used during the PPR intervention, particularly to visualize the ball flight and precise landing area. See Figure 1.

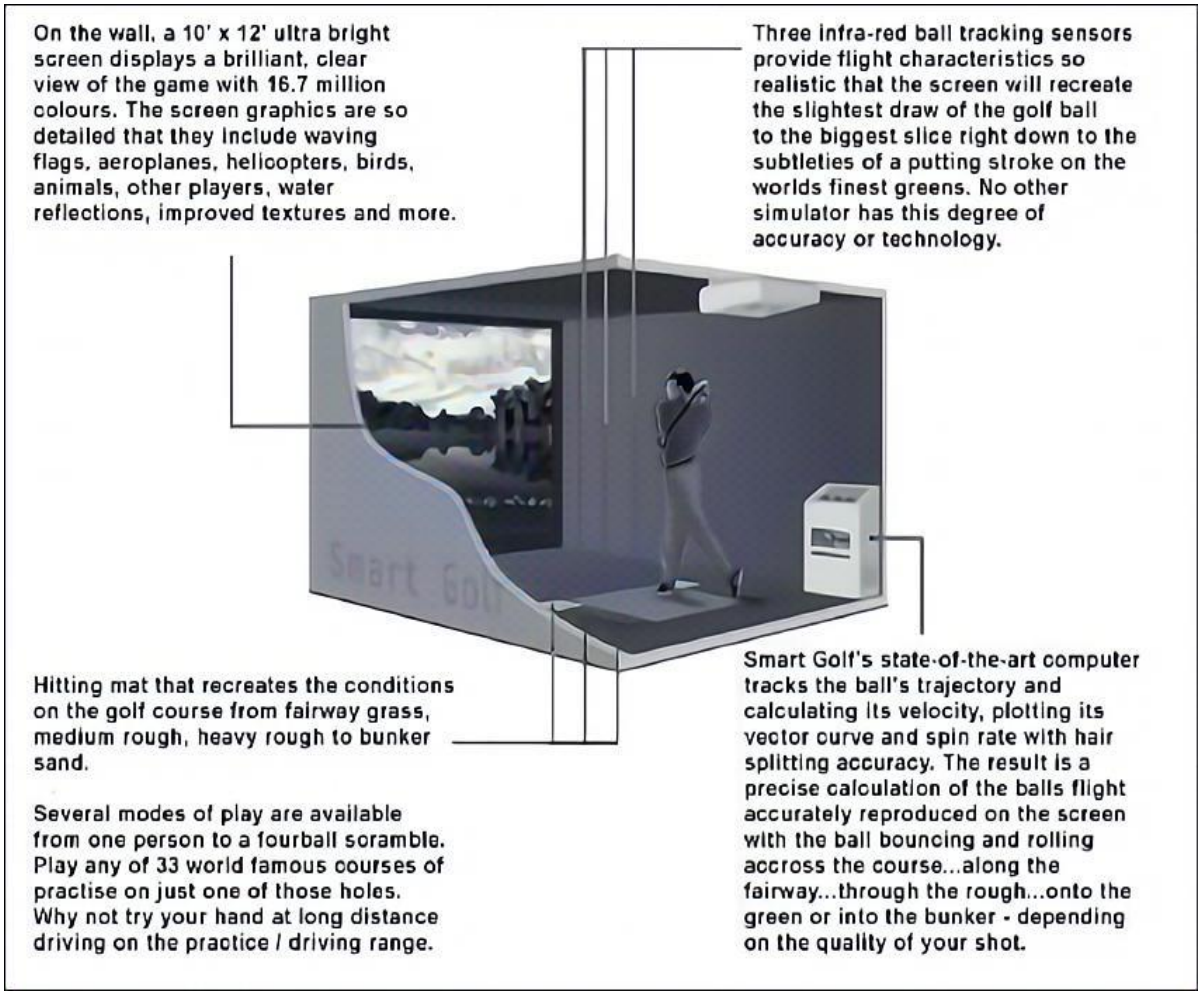

Figure 1: Golf simulator (Cotterill, 2007)

Table 6: Timeline and activity for Judith's PPR intervention

	Timeline and activity			
Intervention	Week1-3 Training/practice	Week4-5 Competition	Week6-8 Training/practice	Week9-10 Competition
PPR	Practice with Singer's FSS for Self-paced Skills.	Utilize PPR training skills in competitions based on task demand & individual needs.	Scrutinize intervention outcome and constantly adjust or optimize skills where necessary.	Re-apply intervention skills in competitions to test and further optimize them.

3.6 Follow-up evaluation of the PPR intervention

At all stages of the intervention, the sports psychology consultant needs to ensure the performers feel satisfied with the mental skills incorporated into their routines and needs to explain to them why and how such skills are implemented (Mesagno et al., 2019). In the reflection on the development of a PPR for an elite golfer, Shaw (2002) suggested that in future, he would encourage the performer to keep a retrospective diary of all stages of the intervention. The advantage of a reflective diary is to provide a detailed log of events and to underpin in-depth learning. This is recommended to every performer involved in the intervention (Shaw, 2002). Although a diary is a beneficial means, consultants also need to realize it would be an extra demand placed on the performers. Because in many sports domain, performers might feel this is an unnatural process, as such, they might find it relatively demanding (Keegan et al., 2022). Hence, with the continuing development of technology, alternative approaches are also practical. Performers can be encouraged to keep digital records of their thoughts via laptops, cellphones, or voice recorders, which can also accommodate the intervention purpose. Meanwhile, less instantaneous tools (e.g., text messages) can also be utilized for performers to reflect on the intervention process and their perceptions of the implementation of the training routines (Mesagno et al., 2019).

Therefore, after practice or competition, Judith will be asked to reflect on her performance with *Reflective Diary* and discuss the key aspects of her evidence-based performance via phone, e-mail, or online meeting. She will be encouraged to discuss any issues that emerge, but will be prompted to reflect on her attentional focus, anxiety management, and perceived control particularly. By reflecting on the performances positively and constructively, Judith is expected to relieve her choking situations and enhance self-confidence.

In addition, to consistently compare the changes in Judith's performance, a follow-up semi-structured interview based on the *Reflective Questioning* approach will be conducted, as it is helpful for performers to reflect on the grasped intervention knowledge and practices (Martindale & Collins, 2014). The reflective questions of the semi-structured interview can be found in Appendix E.

Finally, the CSAI-2R questionnaire will be utilized to scrutinize Judith's intervention effectiveness and compare whether her anxiety level is reduced after the PPR intervention.

4. Conclusion

In conclusion, this study aims to prevent the situation of putting distraction and loss of attentional control that result in choking performance for the young golfer. Through a series of needs analysis instruments based on the assessment model CBCM, this study finds that the performer's situation mainly arises from her debilitative anxiety, poor focus, low confidence and a lack of perceived control. The strengths of this study is that a reasoning chain is constructed according to the performer's diagnose assessment by the consultant, and a PPR intervention program is proposed to improve her contest performance. In all, this study contributes to designing a complete set of PPR intervention program for the occupational golfing field, and providing implications for solo performers who have similar situations in other sports fields.

There are limitations to this study. For example, albeit some follow-up evaluation methods are introduced to measure the intervention's effectiveness, this study did not trace the performer's real performance at each intervention timeline. Therefore, future research may employ the longitudinal study to record the performance, and refine the PPR intervention program accordingly.

Statement and Declarations

Funding: The author(s) received no financial support for the research, authorship, and/or publication of this article.

Conflicts of Interests: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Acknowledgement: This intervention program was completed with the coach of the Senior Lecturer Dr. Amanda Martindale who is an expert in Sports & Performance Psychology at the University of Edinburgh. I appreciate her commitments and contributions to the work.

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Appendix A: The semi-structured interview on Judith's pre-performance

Question 1: Do you feel pressurized?

Diagnosis: Pressurized due to unrealistic expectations

Transcript: 'I have to perform well...as these events are very critical and just come across once a year. It should be the reward that brings in such pressure. Each time I didn't win a key event... I feel more and more added-up pressure... I must win it this time... it's gonna be this year.'

'The pressure heightens...as such, it overloads. The pressure comes from my desire to win. However, I just feel I work on the processes of the game... Honestly, my coach realized the importance of a task-focused approach in the core events, but I have to take away the trophy, consequently... I just could focus on the processes.'

'At the time I feel pressurized, it is mainly from my too high expectancy. In one of my choking situations, I expected myself to win it unrealistically, whilst the real situation was, a top 10 finish would have been excellent.'

'They assume that I should hit every green, and sink every putt. It's an overloaded pressure. I felt bad. I knew I was capable to win it, everybody expects me to achieve it, but at last, I was losing ground... I dropped a number of putts. I felt more pressurized when I was playing more bogeys...'

Such heightened levels of perceived pressure finally induced her choking. 'I fear...playing a fool of myself... I am diverting my attention from the putt, I am not concentrating on my swing. I am thinking too much about what other people might think of me. What will they say if I am losing ground... As a result, I rush myself, to get away from them.'

Question 2: When you feel pressurized, can you focus on the task demands at hand?

Diagnosis: Distraction

Transcript: 'I almost cannot swing, because I am concerned about the bad putt, or the bad putts I ever played. I think where the ball could go, rather than where it should go. I even have to extend my back and feel the tension in my shoulder to get into the right position.'

'When I'm playing bad, I lose focus on the task at hand... I am indecisive or not concentrating on planning the ball's routine.'

'When I perform well, it seems all about the processes...but whilst choking, I go ahead of seeing my name carved on the trophy like I already stand on the podium and am taken pictures by the media. I cannot focus on the things that I need to, and when I do this, I am signaling myself negative messages. When I feel anxious, I lose focus on the task demands at hand, I cannot expect to execute them well.'

Question 3: So what emotions come up while you cannot focus on the putting?

Diagnosis 1. Anxiety

Transcript: 'I get so nervous. It makes me feel sick...and I cannot do anything else to relieve the anxiety. As a result, I try to get off the tee as fast as I could. I feel anxious, but it was not positive anxiety. I just think I have to be nervous to play my best, but that's not a positive anxiety. It is more of negative anxiety.'

Diagnosis 2. Induced perfectionism

Transcript: 'I played quite well the day before, as a result, I had a higher expectation of my next performance. However, such expectation was possibly beyond my capability at that time. I cannot calm down to reflect on my way back then. My choking incidences happened when I was setting overtly high standards of performance. As such, I was trying to perform beyond my capability that barely happens...But when I set realistic expectations, there is nearly no added pressure to play well.'

Question 4: Can you feel able to control your feelings or cope with the situations?

Diagnosis: Loss of perceived control

Transcript: 'I begin to rush and push myself, and I can't stop it. I have no focus or perceived control whatsoever. I perceived myself unable to cope with the demands of the situation at hand during my choking.'

Appendix B: Retrospective self-report survey

Name: Judith Handicap: 3 Date: April 20,2022

These questions are designed to help you reflect on your competitive golf experiences over the last two years and develop your competition preparation plan.

A. Think of your best performance in the last two years and respond to the following:

1. *How did you feel just before playing?*

No determination to achieve goal 012345678**<u>9</u>****<u>10</u>** Completely determined

No physical activation 012345678**<u>9</u>****<u>10</u>** High physical activation

No self-paced 012345678**<u>9</u>****<u>10</u>** High self-paced

No confidence 012345678**<u>9</u>**10 Complete confidence

No mental calm 012345678**<u>9</u>**10 Mentally calm

2. What were you saying/thinking to yourself on just before the round?

Judith: I am fully immersed in my own pace, and was super focused on the putting at hand. I could feel a flow state integrating my cognition and pre-performance behaviour. I had unwavering confidence and maximum certainty/determination in achieving the outcome. I just said to myself: okay, just do it!

B. Think of your worst performance in the last two years and respond to the following:

1. How did you feel just before playing?

No determination to achieve goal 0**<u>1</u>**2345678910 Completely determined

No physical activation 012**<u>3</u>**45678910 High physical activation

No self-paced 01**<u>2</u>**345678910 High self-paced

No confidence 0**<u>1</u>**2345678910 Complete confidence

No mental calm 0123**<u>4</u>**5678910 Mentally calm

2. What were you saying/thinking to yourself just before the round?

Judith: Once upon a time, I felt so pressurized and just thought, I would be laughed at by the audience, and discontented by the other team members, the coach, the whole world if I missed this critical putt.

Appendix C: Revised Competitive State Anxiety-2 (CSAI-2R)

Revised Competitive State Anxiety–2 (CSAI-2R)

Directions: A number of statements that athletes have used to describe their feelings before competition are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now – at this moment. There are no right or wrong answers. Do not spend too much time on any one statement, but choose the answer which describes your feelings right now.

1. I feel jittery (somatic anxiety, 5).
2. I am concerned that I may not do as well in this competition as I could (cognitive anxiety, 7).
3. I feel self-confident (self-confidence, 9).
4. My body feels tense (somatic anxiety, 8).
5. I am concerned about losing (cognitive anxiety, 10).
6. I feel tense in my stomach (somatic anxiety, 11).
7. I'm confident I can meet the challenge (self-confidence, 15).
8. I am concerned about choking under pressure (cognitive anxiety, 13).
9. My heart is racing (somatic anxiety, 17).
10. I'm confident about performing well (self-confidence, 18).
11. I'm concerned about performing poorly (cognitive anxiety, 16).
12. I feel my stomach sinking (somatic anxiety, 20).
13. I'm confident because I mentally picture myself reaching my goal (self-confidence, 24).
14. I'm concerned that others will be disappointed with my performance (cognitive anxiety, 22).
15. My hands are clammy (somatic anxiety, 23).
16. I'm confident of coming through under pressure (self-confidence, 27).
17. My body feels tight (somatic anxiety, 26)

Note: Original CSAI-2 item number is in parentheses along with factor classification. *Each item is set to a 4-point Likert scale as in the original CSAI-2.*

Scoring key:

Somatic anxiety: 1, 4, 6, 9, 12, 15, 17
Cognitive anxiety: 2, 5, 8, 11, 14
Self-confidence: 3, 7, 10, 13, 16

Subscale score is obtained by summing, dividing by number of items, and multiplying by 10. Score range is 10 to 40 for each subscale. If an athlete fails to respond to an item, merely sum and divide by items answered.

Manuscript submitted: December 11, 2001; *Revision accepted*: March 24, 2003

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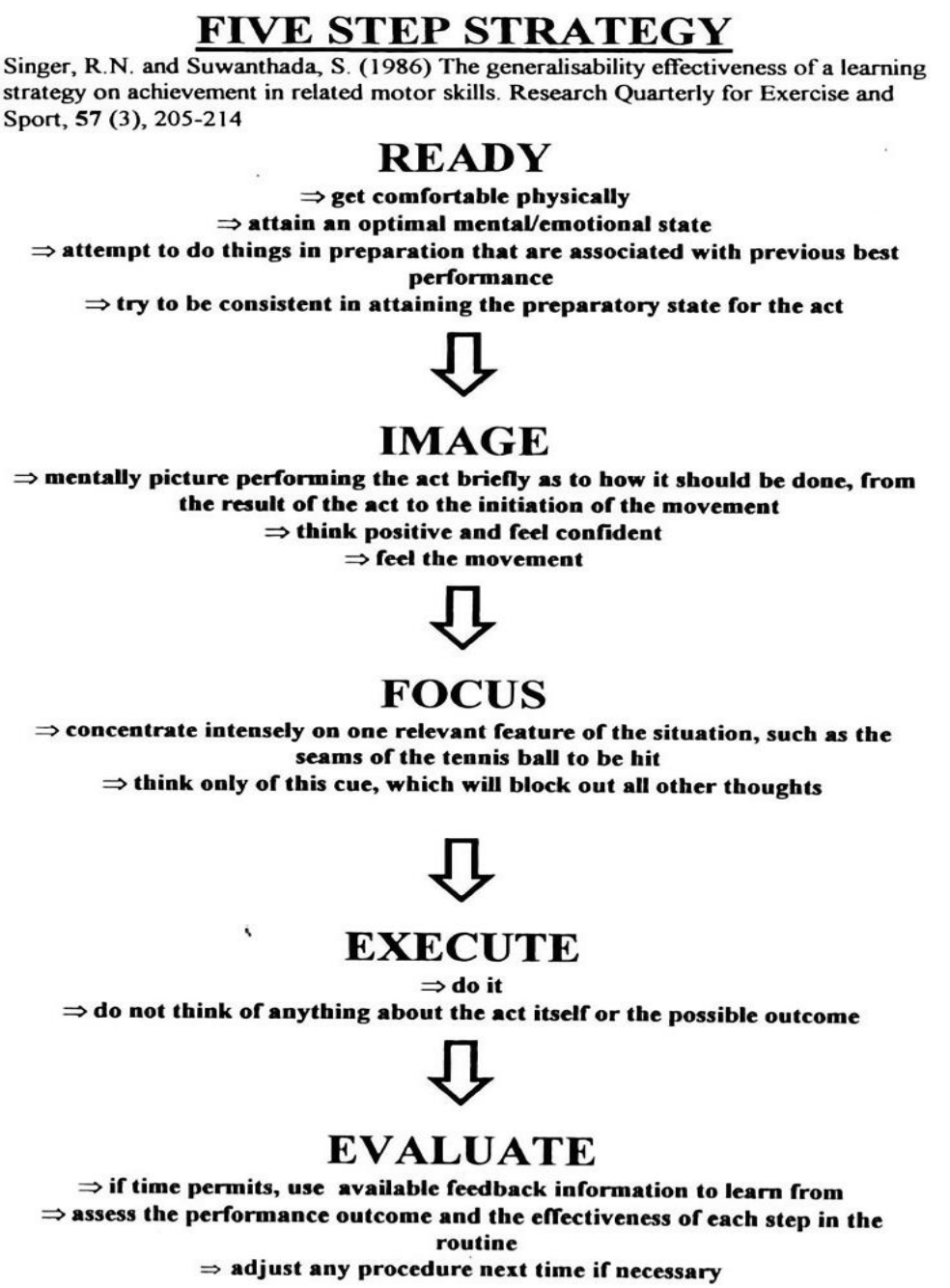
Appendix D: Singer's Five-Step Strategy



Singer, R. N., & Suwanthada, S. (1986). The generalizability effectiveness of a learning strategy on achievement in related closed motor skills. *Research Quarterly for Exercise and Sport*, 57(3), 205-214.

Appendix E: Reflective questioning for the psychological consultant

Questions to reflect on knowledge:

1. How did these knowledge sources influence the session and/or preparation for an event?
2. How did these knowledge sources assist me in addressing the overall goal for practice?
3. Are there any areas of knowledge development that I have become aware of that would benefit my practice?

Questions to reflect on intuitive judgement (or skilled intuition):

1. What cues did I notice in the situation?
2. What previous situations/experiences was I able to access and use?
3. How does this situation fit with my previous experiences?
4. What might I expect the next time I encounter this type of situation?

Questions to reflect on decision making:

1. What 'data' or 'analysis' have I used to inform my decision making?
2. How have I decided where to place my attention during the practice/game?
3. How have my own strengths and weaknesses influenced my decision making?

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