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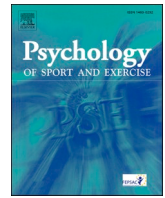
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When time is of the essence: The use of rational emotive behavior therapy (REBT) informed single-session therapy (SST) to alleviate social and golf-specific anxiety, and improve wellbeing and performance, in amateur golfers

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ABSTRACT

Anxieties associated with the social evaluative nature of golf are present in the majority of athletes and impact directly on their wellbeing and objective performance. One potential intervention that could reduce social anxiety in golfers is rational emotive behavior therapy (REBT). There is limited research into the effectiveness of REBT in reducing social anxiety and even less research to assess if REBT can be delivered in time-constricted situations when the expectations for immediate results are high, as is the case with many handicap golfers. The current study used an idiographic single-case study design to assess the effects of REBT-informed single-session therapy (SST) on the social anxiety of five amateur golfers. REBT was employed in a short telephone call to target the performance issue, followed up with a single face-to-face session. Data were collected prior to, immediately following, and four weeks after the REBT intervention. Visual analysis following single-case guidelines revealed substantial reductions in irrational beliefs and social anxiety as well as improvements in wellbeing, scoring average, competition placings and handicap reductions in four out of five golfers. Discussion with golfers at a telephone follow-up indicated the positive receipt of REBT by the golfers and supported the visual analysis findings. This current study supports the effectiveness of REBT and also extends the research by demonstrating that REBT-informed SST can be an effective intervention, in a time-restricted environment, for those golfers with a clear target problem and who are ready to take care of business, providing clear implications for future research and practice.

Anxiety-induced motor-skill breakdown in competitive situations has been attributed, in part, to the personal importance or relevance of the situation, and associated social evaluation within the situation, as perceived by the athlete (Baumeister, 1984). This perception can manifest in the experience of self-consciousness and skilled performance disruption (Baumeister, 1984). The anxiety brought about by perceived social evaluation (i.e., social anxiety) is salient in amateur golfers (Turner et al., 2020) despite the absence of spectating crowds. In other words, social anxiety can arise via the *perception* of social evaluation (“I will be judged”), in the absence of an *actual* social-evaluative stimuli (e.g., spectators), evidenced by the anxiety being out of proportion to the actual threat posed by the social situation (National Collaborating Centre for Mental Health, 2013). In addition, cognitive biases can contribute to social anxiety, whereby beliefs such as “I am unlikeable”

can bias the processing of social stimuli in a negative way, creating negative interpretations of social experiences (Button et al., 2016). Social anxiety is associated with social-evaluative situations that arise as a result of a perception of potential (even distant future) scrutiny by others and potential harm or loss of status arising from negative evaluation (Leitenberg, 1990), and thus social anxiety is as relevant to amateur golfers as it is to professional golfers, and is a viable target for intervention.

With regards to athletes more broadly, James and Collins (1997) found that self-presentational forms of stress were prevalent in over two-thirds of their athlete sample, with many perceiving stresses from the potential for negative impressions and or concern over presence of individuals within the sport context (coaches, friends, strangers). Further, social anxiety might be problematic for non-elite golfers due to

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the consequent application of avoidance strategies in response to evaluative others, specific performance challenges, psycho-emotional concerns, and competitive stress (Giacobbi et al., 2010). Although non-elite golfers may not perform in front of large crowds and may not be under significant mass public scrutiny, they are of course not immune to social anxiety (see Turner et al., 2020). This is in part because, in line with prominent emotion theory (e.g., Gross, 2014; Lazarus, 1999; Meijen et al., 2020), anxiety is cognitively mediated. It is the perception of potential or ongoing negative social evaluation that drives social anxiety, not necessarily the actual presence of social evaluation. For example, a golfer can become anxious about the prospect of sharing their round score with fellow golfers, friends, and family members, even though these significant others may not be in the golfer's presence when they perform, and even though these significant others may not actually negatively evaluate the golfer.

Non-elite golfers have not received much research attention (Giacobbi et al., 2010) despite the popularity of the game (National Golf Foundation, 2002; 7 million golfers in the United States who play over 25 rounds of golf per year). Across the United Kingdom (U.K.), in 2018 golf had 728,000 participants (Active Lives data tables.,), the majority of whom were amateurs above 55 years of age (Club Membership Questionnaire, 2022). Indeed, there is a 1 in 25,000 chance in becoming a male professional golfer, and a 1 in 72,000 chance in becoming a female professional golfer (GOLF- Global Odds Index.(n.d.)). These non-elite players can compete across many tournaments and tours nationally and internationally, and thus although they hold an amateur status, for many players golf is a meaningful competitive endeavor. Therefore, the current study's focus on non-elite golfers across a broad age range has the potential to serve a great many active golf participants, above and beyond the athletes who could be served if the current study focused on elite golfers. At the core of the current study is the social anxiety of amateur golfers, and the application of a psychological intervention to help them overcome performance difficulties arising from their anxiety.

The expectations of negative social consequences arising from underperformance, which in part underpins social anxiety, are often irrational. That is, these expectations are not always realistic or accurate and are often imagined catastrophic by those suffering high social anxiety (Leitenberg, 1990). For example, as a golfer I can infer future social evaluation, disturb myself about this inference using irrational beliefs ("being viewed unfavorably would be terrible"), which consequently inflates my social anxiety. As such, and in line with extant research evidence in sport literature, social anxiety could be reduced by helping golfers to think more rationally, and less irrationally, about their performance (Turner et al., 2020). Indeed, greater irrational beliefs in amateur golfers have been shown to be associated with higher performance anxiety concerning both imminent and future golf performance (Chadha et al., 2019). Therefore, a viable strategy for helping golfers reduce their performance anxiety and social anxiety is to help them challenge their irrational performance beliefs and develop rational performance beliefs. One way of achieving these two aims is through the use of rational emotive behavioral therapy (REBT; Ellis, 1957), a cognitive behavioral approach that is garnering growing interest in sport and exercise psychology literature (Turner & Bennett, 2018), particularly for its use with anxiety-related issues (see Jordana et al., 2020, for a systematic review).

Within REBT, it is one's beliefs regarding events (such as such as rejection, poor treatment, or failure), rather than the event itself, that determines consequent emotional and behavioral responses (Ellis & Dryden, 1997). As such, it is the individual's beliefs that are direct targets for change within REBT, whereby irrational beliefs are weakened, and rational beliefs are strengthened. This cognitive-mediational phenomenon is captured by the GABCDE framework whereby, if individual goals, values, and desires (G) are thwarted or obstructed by events and situations (A), healthy or unhealthy emotional and behavioral consequences (C) can occur, depending on one's beliefs (B) about the self,

others, and the world in relation to the situation (A). The individual's beliefs (B) are then disputed (D) before effective new rational beliefs (E) are formulated and strengthened (see Fig. 1). Rational beliefs (flexible, logical, and non-extreme) beget healthy emotions and adaptive behaviors, whilst irrational beliefs (rigid, illogical, and extreme) beget unhealthy emotions and maladaptive behaviors (Szentagotai & Jones, 2010). In athlete samples, irrational beliefs have been shown to be associated with poorer mental health (e.g., Turner, Carrington, & Miller, 2019), worse performance under pressure (Mesagno et al., 2020), and increased burnout (Turner & Moore, 2016). Therefore, in REBT the typical focus of the work is to identify, dispute, and weaken irrational beliefs, and to identify, develop, and strengthen rational beliefs, to promote emotional wellbeing and goal attainment (Turner, 2016). Much empirical research supports the use of REBT for a gamut of psychological issues (David et al., 2018), and the evidence-base in sport is growing (Jordana et al., 2020). As part of the evidence-base in sport, research indicates that REBT might be a useful approach to working with golfers (Turner et al., 2020), and that rational self-talk, as opposed to irrational self-talk, could be a useful strategy for enhancing putting performance under pressure (Turner, Kirkham, & Wood, 2019).

As well as offering support for the use of REBT with athletes, the recent systematic review by Jordana et al. (2020) also collated the modes through which REBT has delivered across the 39 extant studies. Most studies ($n = 26$) have adopted one-to-one REBT, and within these studies no less than three sessions were conducted (some with 12 or more sessions). Sessions tend to last 30 min to an hour, and most studies also report some online and/or audio/phone support. Therefore, literature to date reflects a range of ways in which one-to-one REBT has been applied, but there is some indication that a greater number of sessions yields more sustained (positive) changes in outcome measures. Indeed, Wood et al. (2017) recommends 5–12 sessions face-to-face sessions to give the participant enough time to understand, practice and reaffirm the principles of REBT, but in contrast, Turner and Barker (2013) showed a significant reduction in irrational beliefs and cognitive anxiety within youth cricketers using just three 20-min face-to-face sessions. In addition, away from sport, Mio and Matsumoto (2018) revealed that a single 50-min REBT session significantly reduced irrational beliefs, and increased self-esteem, within high school students in Japan.

Whilst the research in sport to date reflects appropriate tests of core REBT theory and practice, it does not necessarily accurately reflect the ways in which many practitioners are required to, or choose to, work in actual performance settings. Oftentimes, practitioners may only get one session with an athlete in which to help them, due to logistical, budgetary, and or circumstantial factors. REBT has always espoused brevity, and some authors propose that therapeutic gains can be achieved in as little as one face-to-face interaction (Dryden, 2016). Importantly, brief REBT can be as effective as long-term REBT (Palmer, 1995), especially when presenting issues are non-clinical and non-complex in nature, and so long as athletes adequately develop the ability, through REBT, to self-manage emotions independently and competently (Turner, 2016). REBT is known, in part, for its potential to be effective in a brief amount of time. Indeed, when training practitioners, the psychotherapist who developed REBT (Albert Ellis) would demonstrate the use of REBT in a single-session, and in modern times, REBT training includes 20-min peer-observed bouts of REBT practice where a focus on effective brevity is paramount. This brief approach holds clear value for practitioners working in sport, where time spent with athletes is often limited and precious, and thus effective time-efficient approaches are in much need (Turner et al., 2020). Therefore, adopting, developing, and testing, brief approaches to working with athletes is a research need that can inform applied practice.

Within the REBT literature at large, a proceduralised single-session approach has been posited and formalized by prominent REBT practitioners (e.g., Dryden, 2016; 2021), offering a briefer approach to working with clients. Dryden (2016) has proposed a method of working briefly, that has clear applications for sport psychology practitioners. In

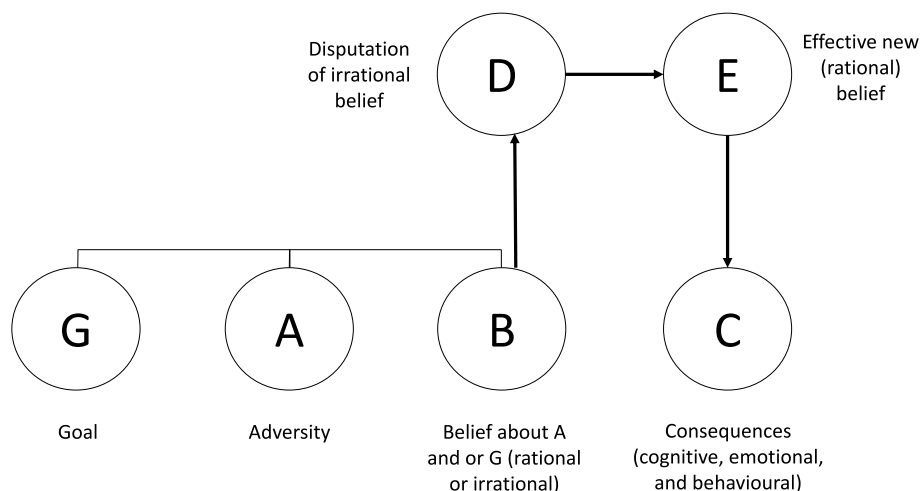


Fig. 1. Schematic representation of the REBT GABCDE framework.

his REBT-informed single-session therapy (SST) approach, Dryden (2016) is influenced by a solution-focused approach to therapy, which is heavily steeped in the theory and practice of REBT. Fundamentally, the REBT-informed SST approach recognizes the importance of behavior and putting learning into practice as quickly as possible, focusses on the impact of cognitions, stresses the importance of making an emotional impact with the client, and prioritizes the importance of clients taking away new meaning. Dryden (2016) emphasizes the importance of dealing with the adversities clients actually face, or think they face, so they can become unstuck and move on from the troublesome negative emotion that they experience with the adversity. A forward-looking, highly focused and solution-based approach is required to help clients better tackle their response and reaction to certain activating events.

It is not so much that practitioners should limit the work to a single session, rather, the practitioner should strive to help the client to find a solution to the client's issues in one session. As Dryden (2020) puts it, "it [single-session therapy] is not necessarily therapy that lasts for one session and that is it. Rather, it is a way of approaching therapy where therapist and client work together to see if they can help the latter get what they want from one session, but if not, more help is available. Paradoxically, it is knowing that more help is possible that enables the client to relax and get the most from the *first and often only therapeutic encounter*" (p. 27). Practitioners can approach the session with the mindset that it could be the only meaningful client-practitioner encounter, and therefore time had better be used purposefully. This approach has also been referred to as One-At-A-Time (OAAT) therapy Hoyt (2011), whereby 'one-at-a-time' does not necessarily mean 'one time'. REBT-informed SST is applied based on the assumptions that the single face-to-face session with the client is the only session, realistic expectations are made clear, a specific problem is presented, specific goals are articulated and focused upon, and feasible solutions are formed and pursued (Dryden, 2021). Viewing the session as an intervention itself, rather than part of an on-going intervention, practitioners and clients can strive to maximize the time they have to develop meaningful solutions to non-complex issues. At critical times in athletes' careers and lives, very brief CBT may be useful where ongoing work is not sought, required, or possible.

The choice to approach a session using REBT-informed SST has clear value for sport psychologists. Sometimes it is not our choice to have one interaction, but is a consequence of the settings we work in. Therefore, a single-session approach fits well within the sport psychology applied milieu, because it provides athlete support at the point of need, rather than at the point of availability (Dryden, 2021). Derived from Dryden's work (2016; 2021), the key questions for practitioners working in

time-limited settings are: How can the client and I make the best progress in the shortest amount of time? How can the client find a solution to their issue in the most efficient way possible? How can I as a practitioner conduct myself in a way that maximizes the time I have with my client? How can I encourage the client to draw on existing strengths in the service of REBT-informed SST goals?

In the current study, the authors aim to extend the work of Turner et al. (2020) who demonstrated that REBT reduced the social and golf-specific anxiety, and enhanced the performance of amateur golfers. We extend this work by evaluating the effects of single-session REBT with five amateur golfers, with a view to reducing their social anxiety and enhancing their wellbeing and golf performance. In the current study we adhere to the concept of wellbeing posited by Tennant et al. (2007) in their development of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). Wellbeing is thus considered to include eudaimonic (people's functioning, social relationships, sense of purpose) and hedonic (e.g., feelings of happiness) components, with greater wellbeing reflecting feeling good and functioning well (Ryan & Deci, 2001). The measurement of wellbeing in the present paper seeks to build upon Davis and Turner (2020) who reported positive changes in wellbeing as a result of REBT with triathletes.

The REBT-informed SST follows Dryden's (2016) framework and guidance, and for some structural components for the intervention, we consult the Rational Emotive Behavioural Therapy & Counselling Manual by The Centre for Stress Management (2019). An explanatory idiographic case study approach is adopted, similar to Turner et al. (2020) and other recent REBT applied research studies (e.g., Chrysidis et al., 2020; Davis & Turner, 2020), which provides a framework for an in-depth, multi-modal way of collecting data, including the use of probes (Kazdin, 2011) while reporting the outcome of the intervention for each individual (Thelwell & Greenlees, 2001). These designs facilitate a better understanding of interventions that are aimed at improving performance and mental states (Voight, 2012). It is therefore hypothesized that, as a result of a single-session REBT intervention, participants will report reduced irrational beliefs, reduced social and performance anxiety, and improvements in wellbeing and golf performance.

1. Method

1.1. Participants and selection criteria

Following university ethical approval, recruitment notices were placed in the newsletter and noticeboard a local golf club, and featured in the club's weekly blog. We engaged potential participants by offering 'Smarter Thinking' (Turner, 2014), which is a more user-friendly term

for REBT used often in sport psychology (Turner, 2019). This approach was adopted to overcome potential concerns over their members requiring therapy, an issue which if left unaddressed, can encourage misplaced perceptions about the role of sport psychologists (e.g., Pain & Harwood, 2004). In line with similar research (e.g., Turner et al., 2020), intervention inclusion was determined by participants' combined responses to the irrational performance beliefs inventory (iPBI; Turner & Allen, 2018), and the golf-specific anxiety questionnaire (GSAQ; Turner et al., 2020). For intervention selection, participants were required to have reported endorsing one of the four core irrational beliefs above norm levels (primary irrational beliefs = 24.98, LFT = 24.77, awfulizing = 22.31, depreciation = 14.85; Turner & Allen, 2018), and to have reported at least moderate levels (a score of 27) of golf-specific anxiety. In total, 16 prospective participants contacted the lead researcher registering their interest in taking part. However, only five golfers completed all necessary steps to actually take part, namely, to complete the informed consent form and the initial GSAQ and iPBI.

Five amateur golfers (3 female and 2 male) met the criteria to participate in the current study ($M_{age} = 59.8$, $SD = 6.52$). All five participants were experienced (playing for over 10 years) golfers with handicaps ranging between 7 and 29 ($M_{handicap} = 18.32$; $SD = 7.83$). The small number of golfers recruited facilitated the idiographic and detailed analysis of intervention effects, so more could be learned by studying fewer participants (Normand, 2016). In line with General Data Protection Regulation (GDPR) and the Data Protection Act, 2018, participants were informed that data would be treated in confidence and would be stored anonymously and securely until shortly after the final session.

1.2. Design

In this study an idiographic single-case, multiple-probe, ABA (Baseline-Intervention-Baseline Review) design was employed (Kennedy, 2005; Kazdin, 2011) as used in previous similar research (Turner et al., 2020). This allows an experimental and idiographic platform to observe the intervention effects in an ecologically valid setting (Barker et al., 2011), and allows the onset of the intervention to be discerned by comparing it to baseline-data acquired prior to its commencement (Hrycaiko & Martin, 1996). The design enables an assessment of short- and long-term effects of REBT-informed SST and enables the identification of a functional relation and intervention effect, if one exists (Kratochwill et al., 2010). The multiple-probe technique (Kazdin, 2011) allows for individual progress reporting and a better understanding of the intervention elements that improve performance and mental states (Voight, 2012), and provides the opportunity for flexible data collection that minimizes participant burden (i.e., minimal repeated self-reports). The ABA design was informed by the chief purpose of the current paper, which was to evaluate the effects of single-session REBT. Whilst an ABAB (see Kratochwill et al., 2010) or multiple-baseline across participants design (see Barker et al., 2011) is preferable, the brief and time-limited parameters at the center of the current paper meant that an ABA design was necessary and desirable. An additional face to face REBT session (i.e., ABAB) would have undercut the single-session philosophy of the current paper, and multiple data collection points at each phase would have undercut the brief nature of the work central to the study. However, taking a multiple-probe approach prohibited us from utilizing Cohen's d to evaluate intervention effects, and runs the risk of not capturing naturally occurring fluctuations in data, for which repeated data points would be needed. Many published case-studies document outcomes for single individuals, but the validity of the present study is enhanced through the recruitment of multiple participants (see Smith, 1988).

1.3. Measures

Golf-specific anxiety (GSAQ). Taken from Turner et al. (2020), this

self-report questionnaire identifies current and acute performance breakdowns in one (or more) aspect of golf (Barker & Jones, 2008). Responses are made on a 5-point Likert-scale from 1 (*strongly disagree*) to 5 (*strongly agree*) to nine statements that describe performance issues that typify performance anxiety (e.g., "I have a fear of playing certain shots") and social anxiety (e.g., "I feel embarrassed that I cannot play certain shots to my ability"). Higher scores reflect greater golf-specific anxiety.

Irrational beliefs. The irrational performance beliefs inventory (iPBI; Turner & Allen, 2018) was employed to provide a performance specific measure of irrational beliefs. It comprises 28-items representing the four core irrational beliefs of REBT theory (primary irrational beliefs, low frustration tolerance, awfulizing, and depreciation). Responses are made on a 5-point Likert-scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) to a series of performance belief statements. The iPBI represents the only performance-specific measure of irrational beliefs and is therefore deemed suitable for use in this study. Higher scores reflect greater endorsement of irrational beliefs.

Social anxiety. The Liebowitz social anxiety scale (LSAS-SR; Baker et al., 2002) was used to assess social anxiety. The scale comprises 24-items depicting various performance and social situations. Participants rated their social anxiety on a four-point Likert-scale, from 0 (*no fear*) to 3 (*severe fear*), and avoidance from 0 (*never*) to 3 (*usually*) for each situation. The avoidance scale ratings are based on the time spent avoiding the situation expressed as a percentage. Specifically, 0 (*never*) = 0%; 1 (*occasionally*) = 1%–33%; 2 (*often*) = 33%–67%; and 3 (*usually*) = 67%–100%. Total scores for each of the fear and avoidance scales are combined to provide an overall score.

Wellbeing. Wellbeing was assessed using the seven-item Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS; Tennant et al., 2007). The SWEMWBS captures a wide conception of well-being, including affective-emotional aspects, cognitive-evaluative dimensions and psychological functioning and is suitable for detecting clinically meaningful change (Collins et al., 2012). The original 14-item scale (WEMWBS) was developed to enable the monitoring of mental well-being in the general population and the evaluation of projects, programmes and policies which aim to improve mental wellbeing. The SWEMWBS uses statements about thoughts and feelings and are positively worded with five response categories from 'none of the time' to 'all of the time'. SWEMWBS is Rasch compatible, which means that the 7-items included in the current study have undergone a more rigorous test for internal consistency than the 14-item WEMWBS and relate more to functioning than feelings, and so offer a more performance orientated perspective on mental wellbeing. In the current study we use cutpoints recommended by Warwick Medical School (2021) of ≤ 17 or less for probable depression, 18–20 for possible depression, 21–27 for average mental wellbeing, and 28–35 high mental wellbeing.

1.4. Data collection procedure

Using a multiple-probe approach and following the ABA study design, data were collected at three timepoints across pre-intervention (A_0) and post-intervention (B_1 and A_2) periods. The three timepoints occurred: one week prior to intervention (A_0), one week following face-to-face REBT session (B_1), and 3–4 weeks (dependent on playing opportunities) following the face-to-face session (A_2). Data provided indicators of intervention effectiveness in terms of irrational beliefs (iPBI), wellbeing (SWEMWBS), social anxiety (LSAS-SR), golf-specific anxiety (GSAQ), and self-report performance diaries (reported by participants via email). Participant baseline (A_0) included participant reports of historical objective performance. In single-case studies, measurements of outcome are recorded repeatedly for individual participants across time and varying levels of an intervention (Barlow et al., 2008; Kazdin, 2010). These varying levels of intervention are referred to as 'phases' with one phase serving as a baseline or comparison, so each participant serves as their own control (Kratochwill & Levin, 2014).

We opted to collect subjective performance data because, as has been recognized by other researchers (e.g., Males & Kerr, 1996; Nicholls et al., 2012; Sameřko et al., 2020), having athletes classify their performance subjectively can provide a more sensitive indicator of performance outcome than objective measures, especially when environmental factors influence objective measures of performance such as weather conditions or the skill of opponents. Objective golf performance data (e.g., round score, finishing place) can be influenced by a litany of extraneous environmental factors and hide the athlete's experience of their performance. Subjective judgements can capture and more fully account for certain aspects of the game which would be important to know when evaluating performance (e.g., McIntosh et al., 2019).

1.5. Intervention

The intervention was conducted by the lead author, who was trained in REBT (Primary Certificate) under supervision of the second author, who was also trained REBT (Advanced Practicum). The authors strived to standardize the intervention across participants to ensure some procedural reliability. As such, all participants received the same numbers of Contacts ($n = 4$), the same exercises within and outside (homework) of sessions, and the intervention closely aligned with standard REBT theory and practice in sport (see Turner, 2019). This current intervention was based upon Dryden's (2016) 4-contact, single-session integrated cognitive behavioral therapy (SSI-CBT) framework with a single face-to-face session. The intervention followed the structure proposed in the Primary Certificate in Rational Emotive Behavioural Therapy and Counselling (Centre for Stress Management, 2019). Although there are four points of contact with the participant in Dryden's SSI-CBT model (including telephone intake and follow-up), it is considered a single-session intervention since it conforms to Moshe Talmon's (1990) definition of single-session therapy; one face-to-face meeting between a therapist and a 'patient' with no previous or subsequent sessions within one year.

Telephone intake and follow-up are therefore part of single-session therapy or coaching but are not face-to-face. In this current study, Contact 1 involved collection of baseline data via email and telephone conversation; Contact 2 involved the telephone intake interview and initial needs-analysis discussion (30-min duration) to gain a better understanding of the specific areas of their game which elicited the highest anxiety, and to agree a focus for the face-to-face session. Following Cunningham and Turner (2016) and the recommendations of Dryden (2016; 2021), to directly address those adversities that the client deems as important, the content of the REBT face-to-face session (Contact 3) was tailored to meet specific irrational performance beliefs linked to each participant's individual goals. Contact 3 (face-to-face REBT session) employed the approach and framework described in the manual for the Primary Certificate in Rational Emotive Behavioural Therapy and Counselling (2019), and was 90-min in length. REBT theory posits that cognitions, emotions and behaviours are not independent of each other but interact and overlap, usually in complex ways, and that beliefs play a significant role in creating emotional health or disturbance (Dryden, 1991). This theory is conceptualized through the GABCDE model of emotional disturbance and emotional health (Neenan & Dryden, 1999) and in Contact 3 the researcher and participant worked through the process recording participant comments on prepared worksheets throughout. The GABCDE model follows the sequence set out in prominent REBT literature (e.g., DiGiuseppe et al., 2014; Turner, 2019), whereby client's goals (G), adversity (A) to those goals, emotional and behavioural consequences (C), and underlying beliefs (B) are assessed, following which irrational beliefs are disputed (D), and effective rational beliefs are developed and reinforced (E).

With this current study, the handwritten GABCDE worksheets ('Enhancing Performance'; © Centre for Stress Management, 2019) were typed out by the researcher and sent to the participant by email within

24 h. An example of a GABCDE worksheet can be found in supplementary materials. Other than acknowledging email receipt and completed questionnaires, no further direct contact was had with the participants until approximately four weeks following the intervention. At this time, a telephone follow-up and study debrief was arranged (Contact 4) to discuss participant experiences and whether they felt they had benefited from the intervention. Audio recordings were taken of all contacts in order to aid the recollection of intervention details and from which participant statements concerning their performance issues, view on the intervention, and post-intervention changes they had noticed to their performance.

1.6. Client expectations

According to Dryden (2016) clients must be active participants in the working alliance and be 'ready to go' from the start for single-sessions to be effective. Consequently, participants were encouraged, as homework, to engage with the process with respect to keeping diaries of their objective golf performance throughout the study, as well as frequent completion of questionnaires. Participants were also expected, again as homework, to spend 30-min preparing for the face-to-face consultation and 30-min following consultation for reflection (Dryden, 2016) to gain the maximum benefit from the session. The participant's homework engagement was verbally assessed in the face-to-face session (Contact 3), and at the follow-up phase (Contact 4).

2. Results

Traditionally, single-case study data are presented graphically (Lobo et al., 2017) and when more than one participant engages in a study, a spaghetti plot showing all the data in the same figure can be helpful for visualization. Visual analysis of graphed data has been the traditional method for evaluating intervention effects in single-case research (Kratichwill et al., 2010; Horner et al., 2012). The visual analysis involves evaluating level, trend, and stability of the data within each phase (i.e., within-phase data examination) followed by examination of the immediacy of effect, consistency of data patterns, and overlap of data between baseline and intervention phases (i.e., between-phase comparisons). Consequently, data were visually inspected for each participant and for each dependent variable, to determine whether intervention effects had occurred (e.g., Turner & Barker, 2013). Given that data in the current study were collected at three timepoints, the data are tabulated (Table 1) to aid clarity to briefly present all study data in one place.

Within idiographic single-case research designs, small changes in variables can lead to substantial differences for athletes (Barker et al., 2011). When changes (and/or variability) are in the desired direction, are immediate, readily discernible, and maintained over time, it is concluded that the changes across phases result from the intervention and are indicative of improvement (Busse et al., 1995). Guided by Turner et al. (2020) intervention effects were determined when: (a) the effect is replicated across participants, (b) the effect occurred immediately following the intervention, (c) there are few overlapping data points between baseline and intervention phases, and (d) the size of the change from baseline is substantial (Hrycaiko & Martin, 1996). For this latter criterion, we report percentage change data across the phases but do not make a determination about magnitude. Clearly, higher percentage change reflects greater magnitude of change, but we do not use labels such as 'substantial' because we do not have percentage change guidelines that would facilitate such descriptive determinations. To aid clarity in the visual analysis of each participant's data, and to adhere to the idiographic nature of the study, the results are ordered by participant, rather than by variable (Thelwell & Greenlees, 2001).

Table 1
Participant scores and percentage change for self-report variables across three data collection phases.

Measure	Participant	Baseline (A ₀)	Post-intervention (B ₁) (% change from A ₀)	Follow-up (A ₂) (% change from A ₀)
Golf-specific anxiety	1	33	23 (-30%)	18 (-46%)
	2	35	24 (-31%)	20 (-43%)
	3	23	23 (0)	22 (-4%)
	4	33	30 (-9%)	22 (-33%)
	5	29	21 (-28%)	31 (+10%)
Irrational beliefs	1	110	89 (-19.09%)	84 (-23.64%)
	2	77	76 (-1.30%)	71 (-7.79%)
	3	60	51 (-15.00%)	49 (-18.33%)
	4	88	90 (+2.27%)	76 (-13.64%)
	5	96	96 (0%)	96 (0%)
Social anxiety	1	46	28 (-39%)	17 (-63%)
	2	9	9 (0)	6 (-33%)
	3	6	5 (-17%)	5 (-17%)
	4	46	52 (+13%)	28 (-39%)
	5	36	36 (0)	36 (0)
Wellbeing	1	22.35	25.03 (+11.99%)	25.03 (+11.99%)
	2	21.54	19.25 (-10.63%)	20.73 (-3.76%)
	3	27.03	28.13 (+4.07%)	32.35 (+19.68%)
	4	19.25	19.98 (+3.79%)	22.35 (+16.10%)
	5	25.03	24.11 (-3.68%)	17.43 (-30.36%)

2.1. Participant 1

Visual inspection of data (see Table 1) showed a reduction in golf-specific anxiety (-46%), irrational beliefs (-23.64%), and social anxiety (-63%), from baseline (A₀) to follow-up phase (A₂). Wellbeing also improved by 11.99% (22.35–25.03). There was an immediate change in all variables from baseline to post-intervention (B₁), with reductions seen in golf-specific anxiety (-30%), irrational beliefs (-19.09%) and social anxiety (-39%). Between post-intervention (B₁) and follow-up (A₂), golf-specific anxiety, irrational beliefs, and social anxiety continued to decrease, but wellbeing stabilized. There were no overlapping data points from baseline (A₀) at either post-intervention (B₁) or follow-up (A₂).

Contact 2 revealed a target problem of 'first tee nerves' and not trusting themselves with this first shot of the round despite extensive pre-round physical and mental preparation (mindfulness and visualization). "I couldn't hit a ball off the tee and my fairway shots were inconsistent too. It was a thoroughly embarrassing experience and I felt I let my partner down spectacularly." Analyzing self-report diaries and discussing at Contact 4, the participant reported their best Stableford scoring result in finishing 3rd in a regional competition; a Matchplay victory over a perceived significant rival and a handicap cut of two shots. "I played my own game and I remembered my true goal!"

2.2. Participant 2

Visual inspection of data (see Table 1) showed a reduction in golf-specific anxiety (-43%) and social anxiety (-33%) from baseline (A₀) to follow-up phase (A₂). Reductions were also observed for irrational beliefs (-7.79%), and wellbeing declined by 3.76% (21.54–20.73), remaining between the 'possible depression' to 'average wellbeing' categories. Across all variables there was an immediate reduction (but wellbeing decreased also) from baseline (A₀) to post-intervention (B₁) with the greatest changes observed for golf-specific anxiety (-31%), and the smallest reductions observed in irrational beliefs (-1.30%). Social

anxiety remained stable from baseline, and wellbeing decreased (21.54–19.73). Between post-intervention (B₁) and follow-up (A₂), irrational beliefs decreased alongside golf-specific anxiety and social anxiety, and increases in wellbeing. There were no overlapping data points from baseline (A₀).

Contact 2 revealed performance issues related to bunker play: "My biggest hurdle - getting out of bunkers or avoiding them in the first place!". The target problem appeared to be both cognitive and affective; "I'm quite an aggressive golfer and I don't seem to learn that safe play is sometimes better play!" Analyzing self-report diaries and discussing at Contact 4, the participant reported generally more sensible club selections thereby avoiding bunkers and a greater success rate at exciting bunkers; "I got out beautifully with the first two then failed miserably with the third, but the sand was wet and hard and the bunker had an awfully steep lip so I'm not beating myself up too hard with that one." The participant reported coming second in a pairs competition only missing out on the top spot by 1 point.

2.3. Participant 3

Visual inspection of data (see Table 1) showed an improvement in wellbeing (27.03–32.35) from baseline (A₀) to follow-up (A₂), which qualifies as high wellbeing. A reduction in golf-specific anxiety (-4%) was observed, but greater reductions were seen in irrational beliefs (-18.33%) and social anxiety (-17%). Across all variables (with the exception of golf-specific anxiety which remained stable) there was an immediate change from baseline (A₀) to post-intervention (B₁): irrational beliefs (-15%), social anxiety (-17%), and wellbeing (27.03–28.13; from average to high wellbeing). Between post-intervention (B₁) and follow-up (A₂) irrational beliefs continued to decrease, alongside golf-specific anxiety and social anxiety, and increased wellbeing. There were no overlapping data points from baseline (A₀).

Contact 2 revealed issues relating to two specific holes and the target problem identified was difficulty in maintaining focus on every shot. Analyzing self-report diaries and discussing at Contact 4, the participant reported applying performance enhancing techniques and thoughts and consequently: "Overall I have played well, more consistently and I have matched or bettered my handicap more often as a result." This sense of consistency was supported by an analysis of scoring averages which revealed a net scoring average post intervention of 73.5 versus a recent 6-month average of 74.6 and last three-year average of 79.6.

2.4. Participant 4

Visual inspection of data (see Table 1) showed a reduction in golf-specific anxiety (-33%), irrational beliefs (-13.64%), and social anxiety (-39%), from baseline (A₀) to follow-up (A₂). Wellbeing improved by 16.10% (19.25–22.35) from possible depression to average wellbeing. Golf-specific anxiety (-9%) showed an immediate reduction from baseline (A₀) to post-intervention (B₁) in the hypothesized direction, although wellbeing improved from 19.25 to 19.98, bordering average wellbeing. Irrational beliefs (+2.27%) and social anxiety (+13%) worsened between baseline (A₀) to post-intervention (B₁). Between post-intervention (B₁) and follow-up (A₂) golf-specific anxiety, irrational beliefs, and social anxiety reduced, whilst wellbeing improved. There was one overlapping data point for irrational beliefs from baseline to (A₀) to post-intervention (B₁).

Contact 2 revealed issues relating to linking the various aspects of golfing performance together in a consistent fashion and the target problem identified was not getting the ball close enough to the pin; "I find my choice of shots approaching the green seem to be unreliable. I don't get close enough to the hole!" Analyzing self-report diaries and discussing at Contact 4, the participant reported breaking a hundred for the first time and achieving their highest Stableford score; "My golf has been up and down, but I am enjoying it despite my handicap going up a point to 30! I managed to win a knockout game last week against a 22 handicap!"

2.5. Participant 5

Visual inspection of data (see Table 1) showed a decline in wellbeing of 30.36% (25.03–17.43) going from average wellbeing to possible depression, and increases in golf-specific anxiety (+10%) from baseline (A_0) to follow-up (A_2). No change was observed for irrational beliefs and social anxiety from baseline (A_0) to follow-up (A_2). Indeed, irrational beliefs and social anxiety remained stable across all phases. From baseline (A_0) to post-intervention (B_1) there was a decrease in wellbeing by -3.68% (25.03–24.11; remained average), but immediate reductions were seen in golf-specific anxiety (-28%). Between post-intervention (B_1) and follow-up (A_2) golf-specific anxiety increased to above base levels (+10%) and wellbeing also worsened from 24.11 to 17.43. There were two overlapping data points from baseline (A_0) at both B_1 and A_2 for social anxiety.

Contact 2 revealed issues relating to coming off the course unhappy with their play and a desire to enjoy the game again; *“I wonder why I play this game when I feel like this.”* The agreed target problem was an inability to accept bad shots. Analyzing self-report diaries and discussing at Contact 4, the participant reported being initially quite positive about future improvements in their game, but admitted to still being frustrated about quality of their play, *“After all this time and all this practice, I should be so much better than this”* (i.e., irrational beliefs of demandingness).

2.6. Summary of results

With the exception of participant 5, these data are suggestive of positive (hypothesized) trends in the target variables from baseline (A_0) through to follow-up (A_2). That is, four participants across all variables demonstrated more positive scores at follow-up (A_2) than at baseline (A_0). Although there were three overlapping data points, only one occurred in the four participants where positive trends were observed from baseline (A_0) to follow-up (A_2). Clearly, for participant 5 the intervention was not effective in reducing irrational beliefs, or improving other target variables.

3. Discussion

This study reports an idiographic single-case examination of the effects of REBT-informed SST on the social and golf-specific anxiety, wellbeing, and golf performance of five amateur golfers. This study supports the findings of past research in golf that REBT can reduce goal specific and social anxiety in golfers (Turner et al., 2020), and supports extant REBT research indicating its effectiveness in reducing anxiety in athletes (Jordana et al., 2020). Specifically, visual analyses of data indicated that four of the five participants reported reduced irrational performance beliefs, golf-specific anxiety, and social anxiety. In three of these four participants, improvements in wellbeing were reported, whilst one participant demonstrated stable wellbeing throughout. In addition, but to varying degrees, these four participants reported improvements in their golf performance.

Visual analyses of data for participant 5 revealed that, despite showing initial signs of progress with a reduction in goal specific performance issues, there was no change in irrational performance beliefs or social anxiety, and golf-specific anxiety and wellbeing worsened at follow-up. In summary, in four of five participants it was possible to demonstrate that REBT-informed SST can be applied with golfers to bring about similar changes reported by Turner et al. (2020) who used a six one to one REBT sessions. Thus, with a focus on contact quality and purpose, it is possible to apply REBT effectively in a single face-to-face session.

Alongside contributing to the growing literature reporting the application of REBT in sport (Jordana et al., 2020; Turner, 2019), the chief contribution that the present paper makes to the extant literature is the application of an REBT-informed SST intervention with athletes. As far as the authors are aware, this is the first paper to do so, and therefore,

the current paper provides important initial evidence for the effectiveness of REBT-informed SST with athletes. In addition to data-driven conclusions, the current paper also offers some important opportunities for reflection on the use of SSI-CBT, albeit limited to the context within which it was applied (i.e., amateur golfers with specific golf performance issues). It is important to consider the strengths and limitations of the REBT-informed SST approach taken in the present paper, given its relative novelty, so that future researchers and practitioners can utilize REBT-informed SST in the most effective manner.

A clear benefit of adopting the REBT-informed SST approach is that time is treated as a precious commodity. Therefore, when working within contexts that have time and resource limitations, like amateur sport, the practitioner and client can make the most of the time they have together by focusing on specific issues (i.e., golf anxiety) in a specific way (i.e., REBT). Past research has indicated that the effects of REBT might dose-responsive (e.g., Turner et al., 2014; 2015) when approached in a group educational manner. The current study indicates that if approached as a meaningful and goal-directed one-to-one session, positive intervention effects can be maintained at follow-up. This is important because Ellis (2001) made it clear that intellectual insight (understand irrationality and rationality, and that rationality is preferred) alone is suboptimal compared to deeper emotional insight (actual emotional and behavioural change in the face of adversity). To attain emotional insight continual work is required by the client to recognise, dispute, and modify irrational beliefs in their lives. In the current study, the largest positive changes occurred at the follow-up phase, approximately four weeks after the face-to-face session, which may indicate that perhaps participants reflected on what they had learned and were moving towards intellectual insight.

The effects of REBT-informed SST on anxiety, wellbeing, and performance, reported in the current study could be attributed not only to shifts in irrational beliefs (a chief aim of REBT) but also to the development of practitioner-client working alliance. As part of REBT-informed SST, pre face-to-face preparation is undertaken in contacts 1 and 2, such as important data collection, but of course rapport is already beginning to be developed between practitioner and client. An REBT-informed SST approach does not denigrate the importance of the working alliance, but does not allow for a protracted endeavor of developing rapport and empathy; there simply isn't time. As such, practitioners utilizing REBT-informed SST need to develop skills in quickly developing rapport with a client, and keeping the relationship focused towards attaining the specific goals of the work (Dryden, 2021). Intervention effects, regardless of the precise school or approach, are in part dependent on the working alliance (Castonguay et al., 2010).

The time-constrained nature of REBT-informed SST is not without limitations. Because of the goal-directed and time-limited nature of the work, the practitioner was more inclined to take a didactic, rather than a Socratic approach, to interactions with the client. This has three main implications. First, the level to which clients can be educated in REBT is restricted, because if a full and comprehensive REBT education is attempted, there would be little time for anything else. As such, it is possible that the client may not achieve the depth of intellectual insight required to kick-start enduring changes in irrational beliefs that extends beyond the current issues being addressed. One solution here could be to prepare a pre-recorded REBT education video for clients to engage with prior to the face-to-face session. Second, the didactic ‘cutting to the chase’ approach, if done inaccurately with haste rather than speed, could mean that the practitioner misses or fails to address the issue that is most important to client. The practitioner could encourage the client to pursue an issue that is tangential, or superficial, to what is really at the center of their performance related problems. Of course, this can be avoided by executing the pre face-to-face contacts diligently and making sure that there are no insurmountable contraindications for REBT-informed SST. Contraindications include where the client finds it hard to connect with a practitioner, client does not want CBT, client requires and wants ongoing CBT, client is vague with presenting issues, and client

is likely to feel abandoned by practitioner after the single session (Dryden, 2016). Third, since the single face-to-face session is critical to the intervention, a high level of skill is required from the practitioner so that the client can derive the maximum benefit from the session. The onus here is on the practitioner to be attentive and organized in order to arrive at the single face-to-face session prepared to work in a way that is direct and to the point, but not rushed and erratic.

The potential limitations of REBT-informed SST can of course be in part mitigated by undertaking specific training in brief approaches to psychotherapy, and by following published guidelines for SSI-CBT (Dryden, 2016) and REBT-informed SST (Dryden, 2021). Particularly, it is important that particular attention is paid to Dryden's (2016) Contacts 1 and 2 to ensure only clients appropriate for this type of intervention are included. Dryden (2016) proposes that single-sessions are not appropriate in all cases, and on reflection, this proposal could help explain some of the results of the current study. Specifically, although all participants appeared to suitable and ready for REBT-informed SST there are a number of contraindications (Dryden, 2016) pertinent to participant 5, most notably they were vague in their presentations, and it was clear with participant 5 that ongoing support would be more appropriate.

In addition, of the five participants, participant 5 engaged the least with homework. Homework assignments are a vital component of REBT (Ellis & Dryden, 1997), should be negotiated rather than prescribed (Dryden, 2009), and should include cognitive (e.g., bibliotherapy), emotive (e.g., rational emotive imagery; REI; Maultsby, 1971), and behavioral (e.g., exposure) assignments (Turner, 2016). The face-to-face session did involve role-play in the form of inference chaining (Palmer, 2009), and REI where appropriate, and exposure was utilized as homework (e.g., deliberately shanking off the first tee). But feedback at contact 4 indicated that participants that embraced homework (participants 1–4) derived the most benefit. Therefore, more needs to be done for athletes who do not engage with homework, and researchers should examine methods that could enhance homework adherence. In hindsight, given the contraindications and lack of engagement, perhaps participant 5 would have been excluded from the study.

Specifically, participant 5 was vague with their presenting issue and did not demonstrate a commitment to belief change. Participant 5 was also resistant to the work, evidenced in part by the lack of homework engagement, and was ill prepared to practice what they were learning through REBT. Ideally, clients should be prepared to actively engage in the work, practice what they learn, and be ready to take care of business immediately (Dryden, 2016). Participant 5's beliefs were also deeply entrenched, and they did not see the value in belief change. Participant 5's beliefs were also very extreme, and on reflection, may have been unlikely to change on the basis of a single face-to-face session. Although the action plan for the work was arrived at jointly by practitioner and participant, participant 5 did not fully commit to the work and remained skeptical about the proposed work. Lastly, participant 5 expressed a desire to get back to the level of attainment they had achieved 15 years prior to engaging with the practitioner, and was hopeful that the work would help them to regain their previous performance levels. Thus, there was a misalignment of the goals of the work between participant expectations and what was actually achievable. This resulted in the practitioner often chasing the participant for questionnaire completion, and a lack of homework adherence.

The ineffectiveness of the intervention with participant 5 should not solely be laid at the feet of the participant. Although the participant of course has some responsibility in their choice in whether or not they engage in the work, there are numerous steps the practitioner could have taken to better assess the participant's suitability for single-session work, and or to enhance the effectiveness of the work. The practitioner could have taken steps to ensure readiness for REBT, for example by assessing the extent to which the participant endorsed the notion that cognition plays a part in emotion and behavior regulation. Turner et al. (2021) found that individuals who did not believe that cognition plays a

role in emotion, reported a lower tendency to apply cognitive restructuring when regulating emotion. Therefore, prior to applying REBT, practitioners could ascertain the extent to which a client already endorses key aspects of REBT, such as cognitive restructuring. The practitioner could have assessed counterindications to brief REBT more considerably, so as to realize the lack of goal alignment between practitioner and participant goals. Also, the practitioner could have been more flexible in their approach and moved away from 'specific REBT', which focusses chiefly on addressing irrational beliefs, towards 'general REBT', which can focus on broader changes such as adjusting one's goals (Dryden & David, 2008).

However, the authors believe that reporting when REBT is ineffective, as well as when it is effective, is important for the advancement of theory and research. In this instance, greater rigor should be applied to selecting athletes for REBT-informed SST based on more than quantitative indicators of participant issues and REBT-informed SST suitability. For example, when screening for suitable participants, prospective participants could be engaged in brief interviews that would enable a qualitative assessment and thus more nuanced and detailed assessment of their issues and their suitability for REBT-informed SST.

The current study has some strengths that should be built upon by future research. Methodologically, we were able to recruit five participants for the study, exceeding the minimum of three subjects considered to be an adequate sample size for the implementation of a single-case design (Kazdin, 1982) and to establish a functional relation and intervention effect (Kratonchwill et al., 2010). In addition, the results are strengthened by adherence to inspection criteria used to determine meaningful change (Hrycaiko & Martin, 1996); changes in targeted variables were substantial, occurred immediately following REBT-informed SST, and were replicated across four out of five participants, incurring few overlapping data points. Quantitative and qualitative data indicated that meaningful change (in the hypothesized direction) was maintained, at follow-up. Most notably, social anxiety dropped below threshold levels (>30; LSAS-SR) in two out of four participants. It should be noted that participant 3's social anxiety was very low at baseline, producing a floor effect, whereby reductions in social anxiety could only be small. Perhaps it may have been useful to use the social anxiety measurement as part of the participant screening protocol, as this may have helped eliminate participants who were very low in social anxiety. Even better, the use of an athlete-specific social anxiety would be advantageous. However, we were mindful of participant burden at the screening stage and wanted to engage potential participants in the study, which we felt was best achieved by using a very short golf-specific measure (i.e., GSAQ) that would be highly relevant to the population being sampled.

It should also be noted by readers that the current paper includes golf players whose age is above what has been reported in past research. Indeed, in their systematic review of the area, Jordana et al. (2020) report REBT usage for mostly young adults, however there are some exceptions ($M_{\text{age}} = 40.83$; Turner & Davis, 2019; $M_{\text{age}} = 41.75$; Davis & Turner, 2020). Turner and Davis (2019) include an athlete who is 65 years of age, and Davis and Turner (2020) include an athlete who is 53 years old. These athletes were triathletes, a sport that also has a broad age range, like golf. They responded well to REBT, and REBT is considered to be suitable for older clients (see Ellis, 1999; Malkinson & Bar-Tur, 2019). Further research is needed in the areas of REBT, and also within sport anxiety research, to more fully understand the implications of age on the treatment of anxiety.

Promisingly, meaningful increases in wellbeing (2–4 points on SWEMWBS; Stansfield, 2013) were reported in three out of four participants, supporting previous research that REBT could be useful for promoting wellbeing (Davis & Turner, 2020). Lastly, the performance improvements reported in this study, both quantitatively and qualitatively, support the research of Wood et al. (2017) who reported quantitative performance improvements after REBT using objective and subjective performance indicators. The jury is still out regarding the

relationship between irrational and rational beliefs and athletic performance (e.g., Mesagno et al., 2020), but the application of REBT at a single-case level appeared to be helpful for athletic performance in the current study.

4. Conclusions

This study contributes to the extant literature by providing an idiographic single-case examination of the effects of REBT-informed SST on irrational beliefs, golf specific anxiety, social anxiety, wellbeing, and performance in five amateur golfers. The reductions in anxiety reported by the participants in this study, show that by disputing irrational performance beliefs and promoting rational performance beliefs, athletes can reduce golf-specific anxiety and social anxiety, and improve wellbeing. In addition, objective performance improvements were reported in terms of higher competition placing, lower average scoring, and handicap reduction. It can be concluded that REBT-informed SST can be an effective intervention for clients with a clear target problem and who are ready to take care of business.

Declaration of competing interest

The authors have declared no conflicts of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.psychsport.2022.102167>.

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