A Case Study with an Elite Archer: Developing Performance Using Rational Emotive Behavior Therapy (REBT).

27/07/2015

**Abstract**

Rational Emotive Behavior Therapy (REBT; Ellis, 1957) is a psychotherapeutic approach receiving increasing interest within sport. REBT is focused on identifying, disputing and replacing Irrational Beliefs (IBs) with Rational Beliefs (RBs) to promote emotional well-being and goal achievement. This study provides a detailed case outlining the application and effect of seven one-to-one REBT sessions with an elite level archer who was experiencing performance-related anxiety, prior to and during competition. The case also offers an insight into common misconceptions, challenges and guidance for those who may consider applying REBT within their practice. Data revealed meaningful short and long –term reductions in IBs and improvements (6-months) in RBs, self-efficacy, perception of control and archery performance. The case supports the effective application of REBT as an intervention with athletic performers, promoting lasting changes in an athlete’s ability to manage their cognitions, emotions and behaviors in the pursuit of performance excellence.

Key words: Case study, Anxiety, Archery, Irrational Beliefs, Dysfunctional Emotions, Mental Skills

**A Case Study with an Elite Archer: Developing Performance Using Rational Emotive Behavior Therapy (REBT).**

The reported use of Rational Emotive Behavior Therapy (REBT; Ellis, 1957) with athletes is fast emerging within the sport psychology literature. Recent research has yielded promising findings, but there still exists scant research documenting and detailing the application of REBT with athletes (Turner & Barker, 2014). REBT is a psychotherapeutic approach developed by Albert Ellis in 1955. Its philosophy is outlined by an ancient maxim stating “men are not disturbed by things, but by the view which they take of them*”* (Epictetus, 55-135 A.D.). REBT emphasizes it is one’s Irrational Beliefs (IBs) about adversity that leads to dysfunctional and unhelpful, emotions, behaviors and cognitive consequences; whereas, Rational Beliefs (RBs) lead to functional and helpful alternatives. These beliefs consist of four core beliefs each comprising of one primary and three secondary beliefs (Digiuseppe, Doyle, Dryden, & Backx, 2013). The primary core irrational belief is a ‘rigid and extreme demand’ followed by three secondary beliefs of, ‘awfulizing’, ‘low frustration tolerance’ and ‘self/other/life-depreciation. In contrast, primary rational beliefs are a ‘flexible and a non-extreme preference’ followed by three secondary beliefs of, ‘anti-awfulizing’, ‘high frustration tolerance’ and ‘self/other/life acceptance’ (Digiuseppe et al.). IBs are dogmatic, inflexible, inconsistent with social reality and hinder long-term goal attainment, instead RBs are helpful, flexible, consistent with social reality and help long-term goal attainment. Research suggests that in the face of adversity, IBs leads to dysfunctional and unhealthy negative emotions (e.g., anger, anxiety, depression) that are associated with maladaptive behaviors (e.g., avoidant and/or escape based behaviors); whereas RBs generate functional and healthy negative emotions (e.g., annoyance, concern, sadness) that facilitate adaptive behaviors (e.g., problem-solving-based behaviors), the latter being more helpful towards the attainment of respective goals than the former (David, Szentagotai, Eva, & Macavei, 2005; Dryden, 2002). Indeed, the theory and efficacy of REBT in dealing with psychological health has been broad and compelling (David et al., 2005), and validated through meta-analyses (e.g., Engles, Garnefski, & Diekstra, 1993; Lyons & Woods, 1991). Whilst established as an effective method of dealing with dysfunctional emotions and maladaptive behaviors research has begun to systematically investigate the efficacy of REBT in developing psychological well being and sporting performance. A review by Turner (2014) outlines the research that has applied workshops and one-to-one REBT programs within elite sport, subsequently reporting promising reductions in IBs, cognitive anxiety and subjective performance benefits (e.g., Bernard, 1985; Elkow & Ostrow, 1991; Larner, Morris, & Marchant, 2007; Marlow, 2009; Turner, Slater, & Barker, 2014a; Turner, Slater, & Barker, 2014b).

All humans have a propensity for both rational and irrational beliefs, where individual differences are buffered by biological traits and cultural/educational influences (Neenan & Dryden, 2004). The dysfunctional and maladaptive responses associated with IBs are magnified within sport where athletes are expected to thrive when encountering competitive, organizational and personal stressors in pursuit of performance excellence (Weston, Thelwell, Bond, & Hutchings, 2009). The inherent fixations upon success and failure, perceived self-worth and an experience of high quality treatment athletes are encouraged into an irrational shift from “want to” to “have to” (Botteril, 2005). For example, an athlete who holds IBs will feel highly anxious (dysfunctional emotion) before competition because the prospect of failing will conflict with their primary belief of demanding success (e.g., “I would like to win, therefore I absolutely must”) and irrationally reinforcing their secondary beliefs of awfulizing and self-depreciation (e.g., “if I do not win, it would be awful and therefore this would make me a complete failure”). Whereas, an athlete with RBs will feel concerned (functional emotion) because the prospect of failing will to a lesser extent conflict with their preference for success (e.g., I really want to win) thus, reinforcing their secondary beliefs of anti-awfulizing and self-downing (e.g., “if I am not successful, it is not awful and it doesn’t mean I’m a complete failure, instead I have only failed this time”; Turner & Barker, 2014).

Essentially, REBT aims to facilitate profound change in one’s thinking, feelings and behaviors, shifting from an irrational to a rational philosophy that addresses the root cause of a symptomatic issue. Research posits that an individual’s belief is comparable to a primary appraisal (Lazarus, 1991). That is a hot cognition, which makes appraisals of an individual’s particular representation of reality therefore being central to the formation of emotion (Hyland & Boduszek, 2012). REBT emphasizes emotional responsibility (Dryden & Neenan, 2015); irrespective of the adversity athletes alone are gifted with the autonomy to determine how they manage their emotions and behaviors (helpful-adaptive/unhelpful –maladaptive). It is both unrealistic and unhelpful to expect an athlete to respond indifferently (Dryden & Neenan, 2015), or with immediate positivity after facing an adversity (e.g., failed selection), instead REBT encourages a healthy negative response. For example, if an individual held RBs regarding failure they would feel sadness, which maybe expressed adaptively through disclosure to others, whereas if they held IBs regarding failure they would respond unhelpfully withdrawing into oneself or attempt to terminate feelings in self-destructive ways (Dryden & Branch, 2008). Ultimately, it is important for athletes to understand RBs accelerate an individual’s recovery from failure towards constructive goal directed actions.

The value of case studies for sport psychologists has been brought to recent attention, providing a beneficial insight into the application, influence and effects of sport psychology interventions (Giges & Van Raalte, 2012). The investigation of REBT and sporting performance whilst emerging remains sparse (Turner & Barker, 2014), additionally there exists no case studies documenting the application of REBT with an elite athlete. The primary aim of this study will be to contribute to the growing body of research evidencing the application and effects of REBT practice with athletes in managing performance related issues. This case provides a detailed practitioner account and an athletes experience throughout the entirety of an REBT program, informing sport psychology practitioners looking to adopt REBT within their practice. The case will also detail the application of typical and novel techniques, common misconceptions and challenges faced when intervening using REBT with an athlete.

**Needs Analysis**

Zara (Pseudonym) is a 44-year-old nationally ranked elite level archer who has been competing in archery at this level for 4 years, representing both county and district teams. Zara, trained four days a week split between the local and regional archery centers. Initially a consultation was organized between Zara and the consultancy team (lead and second author). The use of consultancy teams has been advocated as an effective way of developing the consultancy process and developing the training of neophyte and current sport psychology practitioners (Pitt et al., 2015). During the initial contact with Zara she presented exaggerated bouts of anxiety prior to and during competition, which was having a detrimental effect upon her performance. In addition, these dips in performance were exemplified during indoor archery competitions that Zara considered the easier format compared to outdoor competition (e.g., less extraneous variables, shorter distance, greater margin of error). To compound this issue Zara felt she did not have control or was able to regulate her emotions when encountering challenging situations (i.e., recovering her form). To investigate further the Shortened General Attitudes and Belief Scale (SGABS: Lindner, Kirkby, Weitheim, & Birch, 1999) was administered indicating the presence of high IBs and low RBs (Lindner et al., 1999). Upon further correspondence it became apparent that when Zara perceived low expectations from herself and others (i.e., difficult competition, a longer shooting range, competing against superior opponents) her performance thrived, whereas when the expectation to be successful was elevated (i.e., indoor competition, relatively novice opponents, and perfect conditions) her performance suffered. The following extract is taken from email correspondence where Zara commented on feelings similar to that of “the end of the world” after her form during a competition took an unexpected decline. Such a statement is indicative of the extreme and unhelpful beliefs commonly associated with of REBT, in turn leading to unhealthy emotions and maladaptive behaviors.

“60 arrows in the morning were good and then the 60 in the afternoon were not as good. Some arrows went wayward and I even had a miss. This made me feel quite sick to my stomach because I felt I was doing the same form etc. I told another archer who said 'it's not the end of the world' but it kind of felt like that to me. I checked my equipment; it was fine so it must have been me. Other archers were puzzled and seem astonished that my arrows could be so off”

This discrepancy in performance and psychological control between outdoor and indoor competitions suggested Zara was harboring an irrational approach to failure and success underpinned by demands instead of asserted preferences (Dryden, 2009). Zara was experiencing a somewhat common paradox within high performance sport; the more she demanded success the harder it became for her to attain. Information collated from the needs analysis provided sufficient justification that the application of REBT would provide an appropriate intervention for Zara’s case (see Turner & Barker, 2014).

**The Application of REBT**

The central purpose of REBT is to actively challenge and dispute the client’s irrational philosophy and replace them with effective new rational alternative. From a practitioners perspective to guide and instill such a shift REBT is proposed to be at its most effective on a one-to-one basis, over a series of sessions. The intervention was delivered by the first author who is a supervised trainee Sport and Exercise Psychologist registered within the Division of Sport and Exercise Psychology (DSEP) and an accredited Primary Practitioner in the use of REBT. The intervention consisted of seven one-to-one REBT sessions with the lead author, lasting for approximately 60 minutes per session and conducted over a three-month period. In line with recommendations provided by Turner and Barker (2014) the REBT intervention was separated into education, disputation and a reinforcement phase.

**Education Phase**

Guided by the ABCDE framework the education phase focuses on the ABC elements aiming to educate the client that it is their beliefs (B), that determine their emotional and behavioral consequences (C) rather than the adversity alone (A) (Dryden & Branch, 2008). Here, an emphasis was placed on ownership and control over Zara’s emotional and behavioral response, thus irrespective of the adversity (A) Zara would be able to gain autonomy over the functionality of her emotions and behaviors through the alteration of her beliefs (B). Before addressing the beliefs (B), Zara was asked to outline how she would like to respond (C), a response that would be helpful in the pursuit of her goal of performing well. Therefore, instead of feeling extremely anxious (dysfunctional emotion) Zara wanted to feel nervous (functional), display behaviors which were adaptive in regaining her form and to be in control and optimistic that her performance would revert back to what was expected. The following transcript provides an example of the process involved in eliciting IBs:

**Practitioner:**What are you telling yourself about the situation (A), which leads you to feel and act like this (C)?

**Zara:** That I should be scoring higher, especially during easy indoor competitions

**Practitioner:** Why is it that should you be scoring higher?

**Zara:** Because I can shoot a lot better than I was shooting, especially during indoor shoots. I just have to shoot better than I do outdoors.

**Practitioner:** Would it be fair to say that because you would like to be perform well when you expect to do so, that you believe you have to.

This lead to establishing the irrational belief: “I would like to perform well when I compete in relatively easy competitions, therefore I must, if not it would be awful and this would be unbearable for me”, such a process is then repeated with other challenging situations encountered. Throughout the education phase the client’s emotional responsibility was emphasized, highlighting the B (Belief) – C (Consequence) connection rather than the adversity (A) being solely responsible for their response (Dryden & Neenan, 2015). To reinforce Zara’s self-awareness an ABC diary log was provided as an inter-session task (Ellis & Dryden, 1997). A diary log required her to provide two examples of challenging situations she encountered, noting the Adversity (A), Beliefs (B) and the Consequences (C) of each. During this phase it was important to consider factors that influenced the practitioner-client relationship that facilitated the receipt of REBT. From the outset Zara’s expectations and goals were addressed and regularly reviewed. From a practitioners perspective attention was given to catering the pace of the sessions, interpersonal style (e.g., level of disclosure, humor, formality) and matching the influence base (e.g., expertise, likeability) to Zara’s preference (Dryden & Neenan, 2015). The education phase developed Zara’s self-awareness, moreover it provided the building blocks to access and dispute her core IBs, which can be difficult to access and stubborn to change. (Neenan & Dryden, 2004). REBT at its early conception was essentially an active-directive therapy, yet contemporary advocates of REBT consider that as the intervention progresses to encourage an active and self-directed client (Dryden & Neenan, 2015).

**Disputation Phase**

The disputation phase is the most critical aspect of an REBT intervention (Turner & Barker, 2014), taking place over three sessions. Disputing an individual’s belief is a challenging and sensitive process therefore it was important for the practitioner to manage the levels of humor (Sultanoff, 2013), as well as including elements of practitioner self-disclosure to help normalize her position (Peterson, 2002). Adopting an ABCDE model the client rather than disputing the adversity (A) is encouraged to dispute (D) their clients existing IBs (B) and strengthen their new effective (E) RBs, thus promoting healthy emotions and adaptive behaviors (Ellis & Dryden, 1997). REBT acknowledges that the adversity (A) is assumed to be true and for the time being to accept that it cannot be altered. This is the main distinction made of REBT. The intervention provides an elegant solution instead of an immediate practical solution allowing the client to better manage and respond adaptively in any situation that arises, thus promoting long-term fundamental changes. To illustrate, when Zara became increasingly anxious of her ‘poor’ performance scores, REBT would not challenge probable misperceptions over whether it was a poor performance (A), instead through the promotion of her RBs (B) about that situation it would facilitate a helpful emotion allowing Zara to respond in an adaptive manner. The following extract from Zara provides an example of an analogy allowing Zara to understand this process:

“We spoke of “minimizing the dip”, so the recovery time is quicker and is a more helpful response, instead of having a total flip out with several more errors after those six, and it worked and you know minimize that and it works.”

At the onset of the disputation phase it was important for the practitioner to manage Zara’s expectations highlighting that the disputation phase can be a challenging endeavor. To avoid confusion and to ensure a comprehensive disputation the practitioner used a directive and formulaic manner to dispute Zara’s IBs, starting with the most significant: “I would like to perform well when I compete in relatively easy competitions, therefore I must, if not it would be awful and this would be unbearable for me”. This process involved three strategies based upon evidence, logic and pragmatics (DiGiuseppe, 1991). The following transcript outlines the initial disputation process referring to evidence, logic and pragmatics.

**Practitioner:** What *evidence* is there that you have to perform to your potential when you compete in easy competitions?

**Client:** Well if I know I can shoot that well, I have to.

**Practitioner:** Where is the evidence that because you expect to do so, that you have to shoot well?

**Practitioner:** What do you think about the belief, because you expect to perform well that you absolutely must?

**Client:** Well that would make sense to me.

**Practitioner:** Is this *logical* that because you want something that you must have it?

**Client:** That is what drives me on, I have to perform well.

**Practitioner:** Has there ever been a time where you wanted something but was unable to attaint it?

**Practitioner:** How *helpful* is thinking that you have to perform well?

**Client**: Well that should be helpful for me.

**Practitioner:** How helpful has this belief been for your short and long-term goals?

This disputation process was then repeated with Zara’s awfulizing belief (e.g., it would be awful) and low-frustration tolerance belief (e.g., “this would be unbearable for me”). As exampled Socratic questioning was adopted, asking a series of progressive and open questions that encouraged self-reflection (Dryden & Branch, 2008). As the disputation unfolded Zara verbalized her understanding and agreement of the disputation process, however her para-verbal communication conveyed a somewhat uncertain undertone. Zara became uncomfortable and teary during one session, indeed it is common for clients to harbor doubts during the disputation process therefore it was important for the practitioner to elicit and collaboratively address these doubts (Dryden & Neenan, 2015). Zara voiced her concerns that releasing this dogmatic demand for success would reduce her motivation towards archery; this was particularly poignant because for Zara her determination was an attribute she saw as her main strength. This is a common misconception of REBT, where clients implicitly conclude that through abandoning rigid and dogmatic beliefs this will reduce their motivation to overcome adversity and reach their intended goal, this being incorrectly associated with promoting a philosophy of indifference (Dryden & Branch, 2008). Instead the new RBs rather than softening the importance of the adversity facilitates a constructive view of the situation helping them to achieve their goals (Turner & Barker, 2014). What became Zara’s turning point in the REBT program transpired after replacing her demand (IBs) with a very strong preference (RBs). Accordingly an effective new rational belief (E) was established: “I really really really want to perform well, but that doesn’t mean I have to, If I don’t it is not the end of the world, I will feel rubbish, but I can accept that”. After two sessions of disputing and replacing her IBs with new RBs Zara was able to comprehend that losing her IBs would not reduce her motivation instead alleviating a do or die approach, which had been hindering her performances. The following extract taken from a follow up interview outlines her struggle to dispute and quell her motivational concerns.

“You know sayings such as I would love to shoot to my potential but I don’t have to, that was difficult for me, to me that almost suggested that you might as well not try, but that’s not what it meant. That’s when we added an extra part to the sentence, I struggled to get my head around it, it was like climbing a mountain without the right equipment, I still have the first rational statement laminated in my case for competition”.

To reaffirm the new RBs the practitioner asked Zara to attempt to dispute the new beliefs with evidence, logic and pragmatics. The inevitable failure to dispute the new RBs helps reaffirm the new RBs and extinguish the old IBs. This disputation process was then repeated again with other significant IBs. Using the ABCDE framework Zara understood that she could largely influence and determine how helpful her emotional and behavioral responses were when encountering adverse situations. To supplement working through the ABCDE model, REBT provides various impactful methods that can be used to dispute the clients IBs (see Turner & Barker, 2014; Dryden & Neenan, 2015). With Zara a ‘badness scale’ was used to challenges her awfulizing beliefs and help her gain perspective on the major and minor incidents that she encountered in her life. Zara was asked to place a numerical degree of badness of a series of example adversities onto a scale between 0-100% (Ellis, Gordon, Neenan, & Palmer, 1997). The practitioner then provided a series of sport specific adversities (e.g., missing an arrow in the final) that the athlete typically rates highly on the badness scale. The practitioner then provided a series of major adversities (e.g., loss of a loved one) at which the athlete attempts to rate highly on the badness scale. This process eloquently highlighted for Zara that her perceptions as to the severity of the situation was disproportionate with reality and a dip in performance was not “the end of the world”.

**Reinforcement Phase**

The reinforcement phase is typically introduced towards the latter stage of an REBT intervention and can be completed concurrently with the first two phases. First, an important aspect of REBT is to provide homework tasks to help self-reflection and re-affirm its principles (Ellis & Dryden, 1997). To comply with REBT, cognitive, emotional and behavioral methods were used to reinforce and internalize Zara’s rational philosophy. Cognitive methods involved working through self-help ABCDE worksheets as well as creating rational self-statements. Incorporating the behavioral research of Joseph Wolpe (1958) REBT utilizes behavioral assignments allowing clients to actively seek and test out their newly developed rational philosophies in challenging situations (Froggat, 2005). In this case Zara was asked to purposefully approach indoor competitions where expectations to be successful were high. Due to the intimate overlap between behavioral, cognitive and emotive methods (Ellis, 2004), this assignment allowed Zara to cognitively (e.g., “my performance scores dropped a bit, but it wasn’t awful”) and emotionally (e.g., “It didn’t feel like the end of the world, just annoyed”) dispute her irrational philosophy with logic, evidence and pragmatics; as well as overcoming avoidance tendencies associated with anxiety.

As the intervention progressed it was important to gauge how Zara’s shift in beliefs had impacted upon her well-being and performance (Turner & Barker, 2014). During what would be our last session together (7th), the practitioner and Zara were able to discuss and reflect upon the previous six sessions. Zara cited that “it seems ridiculous now looking back at my previous beliefs*”*, as well as noting she felt very positive about her archery and was enjoying it a lot more. Whilst, facilitating positive affect is not the primary objective for REBT, it encourages the client to abandon self-rating and self-esteem in its place endorsing Unconditional Self-Acceptance (USA; Chamberlain & Haaga, 2001). USA is defined as “the individual fully and unconditionally accepting themselves whether or not they behaves intelligently, correctly, or competently and whether or not other people approve, respect, or love them” (Ellis, 1977, p. 101). The combination of abandoning self-rating and accepting herself as a fallible human being may explain why Zara’s enjoyment of archery improved. Additionally, in line with the Self Determination Theory (SDT; Ryan & Deci, 2000) Zara’s shift from a ‘have to’ to ‘want to’ can be likened to a transferal from an external regulation towards a self-motivated athlete, the latter being a self-endorsed action manifesting in greater interest, excitement, confidence and enhanced performance (Ryan & Deci, 2000).

REBT progressively encourages an active and self-directed client as a result Zara was encouraged to become self-sufficient in managing her emotions and behaviors in any situation. A useful method to gauge and reassert Zara’s understanding of REBT was through ‘Rational Reverse Role-play’ (RRR; Kassinove & Digiuseppe, 1975). Here the practitioner became the client who role-played an athlete with IBs, whilst Zara acting as the practitioner actively elicited, disputed and replaced the IBs with new effective RBs. At the end of the seventh and final session drew to a close it was evident that Zara had made substantial progress verbally reporting that she was increasingly better able to manage challenging situations. Finally, on the seventh session Zara stated she no longer required routine one-to-one sessions, instead feeling independent and capable of managing from there onwards. Subsequently, it was mutually agreed that no further sessions would be necessary unless requested otherwise. Whilst communication was maintained with Zara over the following months no further REBT sessions were completed. REBT provides a framework that is pro-active in its approach and also re-active towards the client’s needs. In the case of Zara REBT provided a brief therapy (Ellis, 2013), focused on dealing and resolving Zara’s specific issues, in the instance deeper problems exist a longer program can be provided.

**Structured Intervention**

To ascertain intervention effects, self-report and performance scores were collected throughout the intervention and at follow-up time points. To provide social validity a semi-structured interview was conducted with Zara at the end of the REBT program (Page & Thelwell, 2013). Questions were orientated around changes in dependent variables, the intervention process and objective archery performance (Hrycaiko & Martin, 1996). To monitor changes in Zara’s IBs the SGABS (Lindner et al., 1999) was administered at pre-, middle, post-intervention and three and six month follow-up time points (see Figure 1). The SGABS reported meaningful short and long-term increases in Zara’s RBs and decreases in IBs. REBT theory posits that RBs and IBs are not bi-polar constructs (e.g., high IBs does not signify low RBs; David, Lynn, & Ellis, 2010). Overlapping with the disputation phase Zara reported increases in RBs simultaneously with decreases in IBs between sessions one to five. The long-term maintenance of these changes supports that REBT successfully guided Zara from an irrational to a rational philosophy. Such a shift was reflected in the following transcript:

“I wasn’t convinced at the beginning that you could help. I followed what you said to the letter, slowly I was surprising myself, my mind-set was changing as well as improving my scores as I went along. I wasn’t as anxious when little issues arose I had those little statements which I carried which helped a lot.”

IBs are detrimental for psychological well-being yet within sport there exists a paradox which suspects whether IBs can be considered motivational (Turner & Barker, 2014). To investigate this matter social validation indicated that Zara’s motivation for archery had been maintained, notably highlighting she had been enjoying competition a lot more. The motivational effect of REBT can be exampled in the following extract:

“I know I am a good archer, now I am physically fit, my style is excellent and my head is now in the right place, because of everything we have worked through, I do have a more relaxed attitude towards archery, which is benefiting my scores greatly and I can put everything negative happens in the right perspective and minimize the gravity if you like. It helps me to recover better and I’m just more chilled, and to do a good shot you have to be relaxed; it hasn’t effected my motivation and that was a big scare that it might”.

Results reported meaningful short and long-term improvements in Zara’s self-efficacy and perception of control in being able to execute performance indicators (see Figure 2). These markers included shot accuracy, focus, shooting consistency, shooting control, appropriate shot timing, remaining strong throughout the shot, maintaining composure, producing one continuous movement for shots, maintaining shooting position and performing to potential. Such improvements were reflected in Zara’s archery performance scores (see Figure 3). Results reported a 9.24% increase in average percentage of maximum performance score between nine pre-intervention competitions (*M*= 75.64, *SD* = .09) compared to nine post-intervention onset competitions (*M*=84.88, *SD* = .05). It was hypothesized that changes in Zara’s beliefs provided her with the autonomy to manage her emotions and behavioral responses, in turn reinforcing her perception of control over her performance. Improvements in self-efficacy scores can be explained by the close association between athletes perceived control and self-efficacy (Jones, Meijen, Mcarthy, & Sheffield, 2009), or being a consequence of performance improvements. The two-patterned response following irrational or rational beliefs is comparable to an athlete’s perception of anxiety being facilitative or debilitative to performance (Jones & Swain, 1995). Thus Zara perceived her emotions as facilitative towards reaching her performance goals in turn enhancing her self-efficacy. The catastrophe model (Fazey & Hardy, 1988), to some extent may explain Zara’s performance improvements. A reduction in IBs may increase the threshold at which the existence of high cognitive anxiety and increased physiological arousal will lead to a catastrophic drop in performance of which Zara was previously experiencing.

The precise influence of IBs on control, self-efficacy and athletic performance has received negligible attention within the extant literature. While this case provides tentative postulations further laboratory based research is required to understand the precise effects of REBT on performance. This case study further adds to the extant sport psychology research supporting the use of REBT as an appropriate and effective approach for sport psychologists to use with athletes who present with high IBs. However, to allow for causal and more reliable conclusions to be drawn future researchers should consider adopting applied research methods including the procedures characteristic of single-case research (Barker, McCarthy, Jones & Moran, 2011). To illustrate, single-case designs ensure provision of an individualized intervention, allowing for the onset of the intervention and meaningful changes in the dependent variables to be compared against stable and representative baseline data (Hrycaiko & Martin, 1996); in turn, the precise effects of REBT would be more accurately discernable.

**Considerations for Practitioners**

For practitioners the ABCDE framework central to REBT is seemingly simple to comprehend and both logical and linear within its application. However, it would be recommended for practitioners considering this approach to gain a broad theoretical and applied understanding (e.g., primary practicum in REBT) before adopting REBT within their practice. When contemplating the use of REBT practitioners are recommended to consider a sufficient timescale (5-12 sessions) when providing clients with enough time to understand, practice and re-affirm the principles of REBT (see Turner & Barker, 2014). It is important to consider the pace and not overwhelm the client, this can be monitored through on-going collaborative reflections and reviews of the clients progress. (Grant, Townsend, Mills, & Cockx, 2009). When applying REBT the practitioner should manage misconceptions of REBT, mainly the misinterpretation that individuals should adopt a stoic approach; that is an emotionless and indifference to their predicament or the situation. REBT does not withdraw negative emotions in response to adversity, instead encourages a helpful and adaptive response. The process of reaffirming an individual new effective RB’s requires long term diligence from the client, where at the beginning REBT assumes an educational approach, progressively the practitioner is encouraged to adopt a collaborative and client centered approach (Dryden & Neenan, 2015). This point is illustrated in the following extract:

“I don’t feel lost without you which is good, although I know that you are at the end of the telephone or email and I have my file with all my resources in. In times of doubt I go through that, and reinforce that stuff we done together. I have my little sayings, you know hesitance has ways of creeping back in so it was important to keep my mind strong…these bouts of anxiety seems so long ago, it seems like we have made such large leaps.”

**Conclusion**

This case study documents the application of an REBT program and its short and long term effects on an elite level archer. This study provides an insight into common misconceptions, challenges and guidance for practitioners who may consider adopting it within their practice. Supporting its core hypothesis it is clear that the case has shown REBT to be a potentially effective psychological intervention to manage IBs and develop sporting performance, allowing the athlete to manage and respond adaptively to adversities that they will inevitably encounter. The maintenance effects found across all dependent variables demonstrates how REBT targets the root of unhealthy and dysfunctional responses to adversity, thus providing potentially long lasting and curative effects. Whilst not claiming to be a panacea for all issues athletes may encounter, REBT is elegant in that the framework can be used across all aspects of life, and not simply limited to sport. Avenues for future investigation should explore the effect of REBT on an athlete’s motivational approach to their sport, as well as its influence on positive affect. Additionally, future studies may wish to explore the effect of REBT used in conjunction with other psychological approaches and techniques to further facilitate its effect. For example Personal-Disclosure Mutual-Sharing and REBT can be utilized within group settings (PDMS; Dunn & Holt, 2004), the use of Motivational Interviewing techniques (MI; Rollnick & Miller, 1985) could be implemented to strengthen the clients motivation for change, and finally adopting various elements of positive psychology (Seligman, 2012) to actively promote positive affect within the client.

**References**

Barker, J., McCarthy, P., Jones, M., & Moran, A. (2011). *Single Case Research Methods in Sport and Exercise*. Oxon: Routledge.

Bernard, M.E. (1985). A rational-emotive mental training program for professional athletes. In A. Ellis & M.E. Bernard (Eds.), *Clinical applications of rational-emotive therapy* (pp. 227–309). New York: Plenum.

Botterill, C. (2005). Competitive drive: Embracing positive rivalries. In S. Murphy (Ed.), *The sport psych handbook* (pp. 37–48). Champaign, IL: Human Kinetics.

Chamberlain, J. M., & Haaga, D. A. (2001). Unconditional self-acceptance and psychological health. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *19*(3), 163-176. 10.1023/A:1011189416600.

David, D., Lynn, S. J., & Ellis, A. (Eds.). (2010). *Rational and irrational beliefs: Research, theory, and clinical practice* (pp. 339-348). Oxford: Oxford University Press.

David, D., Szentagotai, A., Eva, K., & Macavei, B. (2005). A synopsis of rational-emotive behavior therapy (REBT); fundamental and applied research. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *23*(3), 175-221. doi: 10.1007/s10942-005-0011-0

DiGiuseppe, R. (1991). Maximizing the moment: How to have more fun and happiness in life. Cassette recording. New York: Institute for Rational Emotive Therapy.

DiGiuseppe, R. A., Doyle, K. A., Dryden, W., & Backx, W. (2013). *A Practitioner's Guide to Rational-Emotive Behavior Therapy*. Oxford University Press.

Dryden, W. (2002). Rational emotive behaviour therapy; a reader. London: SAGE.

Dryden, W. (2009). *How to think and intervene like an REBT therapist*. London: Routledge.

Dryden, W., & Branch, R. (2008). *Fundamentals of rational emotive behaviour therapy: A training handbook*. Chichester: John Wiley & Sons.

Dryden, W., & Neenan, M. (2015). *Rational emotive behaviour therapy: 100 key points and techniques*. Hove: Routledge.

Dunn, J. G., & Holt, N. L. (2004). A qualitative investigation of a personal-disclosure mutual-sharing team building activity. *Sport Psychologist*, *18*(4), 363-380.

Elko, K. P., & Ostrow, A. C. (1991). Effects of a rational-emotive education program on heightened anxiety levels of female collegiate gymnasts. *The Sport Psychologist*, *5* (3), 235- 255.

Ellis, A. (1957). Rational psychotherapy and individual psychology. *Journal of Individual Psychology, 13,* 38–44.

Ellis, A. (1977). Psychotherapy and the value of a human being. In A. Ellis & R. Grieger (Eds.), *Handbook of rational-emotive therapy* (pp. 99–112). New York: Springer.

Ellis, A. (2013). *Better, deeper and more enduring brief therapy: The rational emotive behavior therapy approach*. Routledge: Bruner/Mazel Inc.

Ellis, A., & Dryden, W. (1997). *The practice of rational- emotive behavior therapy*. NewYork: Springer Publishing Company.

Ellis, A., Gordon, J., Neenan, M., & Palmer, S. (1997). *Stress: A rational emotive behavior approach*. London: Cassell.

Ellis, A. (2004). Why rational emotive behavior therapy is the most comprehensive and effective form of behavior therapy. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *22*(2), 85-92. doi:10.1023/B:JORE.0000025439.78389.52

Engles, G. I., Garnefski, N., & Diekstra, R. F. W. (1993). Efficacy of rational emotive therapy: A quantitative analysis. Journal of Consulting and Clinical Psychology, 61, 1083–1090. [doi:10.1037/0022-006X.61.6.1083](http://psycnet.apa.org/doi/10.1037/0022-006X.61.6.1083)

Epictetus (1948). The Enchiridion. Indianapolis: Bobbs-Merrill. Gordon, R. M. 1987. The Structure of Emotions. Cambridge: Cambridge Univ. Press.

Fazey, J. A. & Hardy, L. (1988). The Inverted-U Hypothesis: A Catastrophe for Sport Psychology. British Association of Sports Sciences Monograph no. 1. Leeds: The National Coaching Foundation.

Froggatt, W. (2005). *A brief introduction to rational emotive behavior therapy*. From [http://www.rational.org.nz/prof- docs/Intro-REBT.pdf](http://www.rational.org.nz/prof-%20docs/Intro-REBT.pdf)

Giges, B., & Van Raalte, J. (2012). Special issue of *The Sport Psychologist* case studies in sport psychology introduction. *The Sport Psychologist, 26*(4), 483-485.

Grant, A., Townend, M., Mills, J., & Cockx, A. (2009). *Assessment and case formulation in Cognitive Behavioural Therapy*. London: Sage.

Hrycaiko, D., & Martin, G. L. (1996). Applied research studies with single-subject designs: Why so few?. *Journal of Applied Sport Psychology*, *8*(2), 183-199. doi:10.1080/10413209608406476

Hyland, P., & Boduszek, D. (2012). A unitary or binary model of emotions: A discussion on a fundamental difference between cognitive therapy and rational emotive behaviour therapy. *Journal of Humanistics and Social Sciences*, *1*(1), 49–61.

Jones, M., Meijen, C., McCarthy, P. J., & Sheffield, D. (2009). A theory of challenge and threat states in athletes. *International Review of Sport and Exercise Psychology*, *2*(2), 161-180. doi: 10.1080/17509840902829331

Jones, G., & Swain, A. (1995). Predispositions to experience debilitative and facilitative anxiety in elite and nonelite performers. *Sport Psychologist*, *9*, 201-201.

Kassinove, H., & DiGiuseppe, R. (1975).Rational role reversal. *Rational Living*,*10*(1), 44-45.

Larner, C., Morris, T., & Marchant, D. (2007, September). The management of directional trait anxiety in competitive sports with rational-emotive behavior therapy. Paper Presented at the European Congress of Sport Psychology. Retrieved from http:// vuir.vu.edu.au/2048

Lazarus, R.S. (1991). Progress on a cognitive-motivational- relational theory of emotion. *The American Psychologist*, *46*(8), 819–834. doi:10.1037/0003- 066X.46.8.819

Lindner, H., Kirkby, R., Wertheim, E., & Birch, P. (1999). A brief assessment of irrational thinking: The shortened general attitude and belief scale. *Cognitive Therapy and Research*, *23*(6), 651–663. doi:10.1023/A:1018741009293

Lyons, L. C., & Woods, P. J. (1991). The efficacy of rational-emotive therapy: A quantitative review of the outcome research. *Clinical Psychology Review*. *11*(4), 357–369. doi [10.1016/0272-7358(91)90113-9](http://dx.doi.org/10.1016/0272-7358(91)90113-9)

Marlow, C. (2009). Creating positive performance beliefs: The case of a tenpin bowler. In B. Hemmings & T. Holder (Eds.), *Applied sport psychology: A case based approach* (pp. 65–87). London: John Wiley & Sons Ltd.

Neenan, M., & Dryden, W. (2004). *Cognitive therapy: 100 key points and techniques*. Hove: Routledge.

Page, J., & Thelwell, R. (2013). The value of social validation in single-case methods in sport and exercise psychology. *Journal of Applied Sport Psychology*, *25*(1), 61-71. doi: 10.1080/10413200.2012.663859

Peterson, Z. D. (2002). More than a mirror: The ethics of therapist self - disclosure. *Psychotherapy: Theory, Research, Practice, Training*, *39*(1), 21. doi:10.1037//0033-3204.39.1.21

Pitt, T., Lindsay, P., Thomas, O., Bawden, M., Goodwill, S., & Hanton, S. (2015). A perspective on consultancy teams and technology in applied sport psychology.*Psychology of Sport and Exercise, 16*, 36-44. [doi:10.1016/j.psychsport.2014.07.002](http://dx.doi.org/10.1016/j.psychsport.2014.07.002)

Rollnick, S., & Miller, W. R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy*, *23*(04), 325-334. doi:[10.1017/S135246580001643X](http://dx.doi.org/10.1017/S135246580001643X)

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55*(1), 68. doi:[10.1037/0003-066X.55.1.68](http://psycnet.apa.org/doi/10.1037/0003-066X.55.1.68)

Seligman, M. E. (2012). *Flourish: A new understanding of happiness and well-being* *- and how to achieve them.* London: Nicholas Brealey Publishing.

Sultanoff, S. M. (2013). Integrating Humor Into Psychotherapy: Research, Theory, and the Necessary Conditions for the Presence of Therapeutic Humor in Helping Relationships. *The Humanistic Psychologist*, *41*(4), 388-399. doi:10.1080/08873267.2013.796953

Turner, M. J. (2014). Smarter thinking in sport. *The Psychologist*, *27*, (8), 596-599.

Turner, M. J., & Barker, J. B. (2014). Using rational emotive behavior therapy with athletes. *Sport Psychologist*, *28*(1), 75-90. doi:10.1123/tsp.2013-0012

Turner, M.J., Slater, M.J., & Barker, J.B. (2014a). Not the end of the world: The effects of rational emotive behavior therapy on the irrational beliefs of elite academy athletes. *Journal of Applied Sport Psychology*, 2*6*(2), 144–156. doi:10.1080/10413200.2013.812159

Turner, M. J., Slater, M. J., & Barker, J. B. (2014b). The season-long effects of rational emotive behavior therapy on the irrational beliefs of professional academy soccer athletes [Abstract]. *International Journal of Sport Psychology, 5,*429-451.

Weston, N. J., Thelwell, R. C., Bond, S., & Hutchings, N. V. (2009). Stress and coping in single-handed round-the-world ocean sailing. *Journal of Applied Sport Psychology*, *21*(4), 460-474. doi:10.1080/10413200903232607

Wolpe, J. (1958).*Psychotherapy by reciprocal inhibition*. Stanford, CA: Stanford

University Press.

**Figure Captions**

*Figure 1.* Shortened General Attitudes and Belief Scale (SGABS) scores taken at session one, mid-point, last session and at a 3 and 6-month follow up time point.

*Figure 2.* Self-efficacy and control scores for 10 archery specific performance markers taken on a session by session and at a 6-month follow up time point.

*Figure 3.* Pre- and Post- Intervention competition performance scores - calculated as percentage of maximum score attainable per competition.