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Developing Performance Using Rational Emotive Behavior Therapy (REBT): A Case Study

With an Elite Archer.

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### **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 (6-months) reductions in IBs and improvements 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, Emotions, Mental Skills

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

53 **Introduction**

54 The reported use of Rational Emotive Behavior Therapy (REBT; Ellis, 1957) with athletes is  
55 fast emerging within the sport psychology literature. Recent research has yielded promising  
56 findings, but there still exists scant research documenting and detailing the application of  
57 REBT with athletes (Turner & Barker, 2014). REBT is a psychotherapeutic approach  
58 established by Albert Ellis in 1955. Its philosophy is outlined by an ancient maxim stating  
59 “men are not disturbed by things, but by the view which they take of them” (Epictetus, 55-  
60 135 A.D.). REBT emphasizes it is one’s Irrational Beliefs (IBs) about adversity that leads to  
61 dysfunctional and unhelpful, emotions, behaviors, and cognitive consequences; whereas,  
62 Rational Beliefs (RBs) lead to functional and helpful alternatives. These beliefs consist of  
63 four core beliefs each comprising of one primary and three secondary beliefs (Digiuseppe,  
64 Doyle, Dryden, & Backx, 2013). The primary core irrational belief is a “rigid and extreme  
65 demand” followed by three secondary beliefs of, “awfulizing”, “low frustration tolerance”,  
66 and “self/other/life-depreciation”. In contrast, primary rational beliefs are a “flexible and a  
67 non-extreme preference” followed by three secondary beliefs of, “anti-awfulizing”, “high  
68 frustration tolerance”, and “self/other/life acceptance” (Digiuseppe et al.). IBs are dogmatic,  
69 inflexible, inconsistent with social reality and hinder long-term goal attainment, instead RBs  
70 are helpful, flexible, consistent with social reality and help long-term goal attainment.  
71 Research suggests that in the face of adversity, IBs leads to dysfunctional and unhealthy  
72 negative emotions (e.g., anger, anxiety, depression) that are associated with maladaptive  
73 behaviors (e.g., avoidant and/or escape-based behaviors); whereas RBs generate functional  
74 and healthy negative emotions (e.g., annoyance, concern, sadness) that facilitate adaptive

75 behaviors (e.g., problem-solving-based behaviors), the latter being more helpful towards the  
76 attainment of goals than the former (David, Szentagotai, Eva, & Macavei, 2005; Dryden,  
77 2002). The efficacy of REBT in dealing with psychological health has been validated  
78 through meta-analyses (e.g., Engles, Garnefski, & Diekstra, 1993; Lyons & Woods, 1991),  
79 establishing REBT as an effective model of human functioning.

80         Although scant, early REBT researchers reported the promising effects of REBT on  
81 athletic performance (e.g., Bernard, 1985; Elko & Ostrow, 1991). Most recently, a line of  
82 research systematically investigating the effects of REBT on athletic performance has  
83 emerged. To illustrate, a study by Larner, Morris, and Marchant, (2007) reported that  
84 reductions in IBs and increases in RBs decreased the negative directional interpretation of  
85 anxiety experienced by athletes. Furthermore, elite youth cricketers reported reductions in  
86 IBs and cognitive anxiety after receiving three, one-to-one REBT sessions (e.g., Turner &  
87 Barker, 2013). Using a workshop-based modality, elite soccer academy athletes reported  
88 short-term reductions in IBs after receiving a single REBT workshop (e.g., Turner et al.,  
89 2014a), as well as long-term reductions in IBs after receiving multiple REBT workshops  
90 (e.g., Turner, Slater & Barker, 2014b). Collectively, research demonstrates the potential of  
91 REBT to develop important psychological outcomes relative to athletic performance.  
92 However, to date this research has not used objective markers of performance to better  
93 ascertain the effects of REBT on athletic performance.

94         All humans have a propensity for both rational and irrational beliefs, where individual  
95 differences are buffered by biological traits and cultural/educational influences (Neenan &  
96 Dryden, 2004). The dysfunctional and maladaptive responses associated with IBs are  
97 magnified within sport where athletes are expected to thrive when encountering competitive,  
98 organizational, and personal stressors in pursuit of performance excellence (Weston,  
99 Thelwell, Bond, & Hutchings, 2009). An athletes' inherent fixation upon success and failure,

100 perceived self-worth, and an experience of high quality treatment may encourage an irrational  
101 shift from “want to” to “have to” (Botterill, 2005). REBT aims to facilitate profound change  
102 in one’s thinking, feelings, and behaviors, shifting from an irrational to a rational philosophy  
103 that addresses the root cause of a symptomatic issue. Ultimately, a rational philosophy  
104 accelerates an individual’s recovery from failure towards constructive goal directed actions.

105       Research suggests that individuals’ beliefs are comparable to that of a primary  
106 appraisal (Lazarus, 1991), hereby, influencing an individual’s particular representation of  
107 reality (Hyland & Boduszek, 2012). Therefore, irrespective of the adversity, athletes have  
108 autonomy over their emotional and behavioral response (i.e., functional/helpful vs.  
109 dysfunctional/unhelpful responses; Dryden & Neenan, 2015). It is both unrealistic and  
110 unhelpful to expect an athlete to respond indifferently, or with immediate positivity after  
111 experiencing an adversity (e.g., failed selection), instead REBT encourages a healthy  
112 negative response (Dryden & Neenan). Within the anxiety-performance literature the  
113 regulatory subcomponent of the three-dimensional model (Cheng, Hardy, & Markland, 2009)  
114 re-conceptualizes and supports the adaptive vs. maladaptive distinction in negative emotions.  
115 Explicitly, athlete’s perceived control to cope and attain goals under stress is proposed to  
116 influence both the intensity and adaptive quality of anxiety. For example, an athlete who  
117 holds IBs will feel highly anxious (dysfunctional emotion) before a major competition  
118 because the prospect of failing will conflict with their primary belief of demanding success  
119 (e.g., “I would like to win, therefore I absolutely must”) and irrationally reinforcing their  
120 secondary beliefs of awfulizing, and self-depreciation (e.g., “if I do not win, it would be  
121 awful and therefore this would make me a complete failure”). An athlete would then place  
122 greater demands on themselves, in turn reducing their perception of control and coping.  
123 Whereas, an athlete with RBs will feel concerned (functional emotion) because the prospect  
124 of failing will to a lesser extent conflict with their preference for success (e.g., I really want to

125 win), thus, reinforcing their secondary beliefs of anti-awfulizing and self-downing (e.g., “if I  
126 am not successful, it is not awful and it doesn’t mean I am a complete failure, instead I have  
127 only failed this time”; Turner & Barker, 2014). Athletes with RBs will place less demand on  
128 themselves and experience a greater perception of control.

129 The investigation of REBT and sporting performance whilst emerging remains sparse (Turner  
130 & Barker, 2014), additionally there exists no case study documenting the application of  
131 REBT with an elite athlete. The value of case studies for sport psychologists has been  
132 brought to recent attention, providing a beneficial insight into the application, influence, and  
133 effects of sport psychology interventions (Giges & Van Raalte, 2012). The primary aim of  
134 this study was to contribute to the growing body of research evidencing the application and  
135 effects of REBT practice with athletes in managing performance related issues. This case  
136 provided a detailed practitioner account and an athletes experience throughout the entirety of  
137 an REBT program, informing sport psychology practitioners looking to adopt REBT within  
138 their practice. The case also detailed the application of typical and novel techniques, common  
139 misconceptions, and challenges faced when intervening using REBT with an athlete. The  
140 participant provided informed consent to undertake the research and institutional ethics  
141 approval was granted for the procedures of the study.

142

### 143 **Needs Analysis**

144 Zara (Pseudonym) was a 44-year-old nationally ranked elite level archer who had been  
145 competing in archery at this level for 4 years, representing both county and district teams.  
146 Zara trained four days a week split between the local and regional archery centers. Initially,  
147 a meeting was organized with Zara by the consultancy team (lead and second author). The  
148 use of consultancy teams has been advocated as an effective way of developing the  
149 consultancy process and supporting the training of neophyte and current sport psychology

150 practitioners (Pitt et al., 2015). During the initial contact with Zara she presented exaggerated  
151 bouts of anxiety prior to and during competition, which was having a detrimental effect upon  
152 her performance. In addition, these dips in performance were exemplified during indoor  
153 archery competitions that Zara considered the easier format compared to outdoor competition  
154 (e.g., less extraneous variables, shorter distance, greater margin of error). To compound this  
155 issue, Zara felt she did not have control or was able to regulate her emotions when  
156 encountering challenging situations (i.e., recovering her form). To investigate further we  
157 administered the Shortened General Attitudes and Belief Scale (SGABS: Lindner, Kirkby,  
158 Wertheim, & Birch, 1999), in turn indicating the presence of high IBs and low RBs (Lindner  
159 et al., 1999). Upon further correspondence it became apparent that when Zara perceived low  
160 expectations from herself and others (i.e., difficult competition, a longer shooting range,  
161 competing against superior opponents) her performance thrived, whereas when the  
162 expectation to be successful was elevated (i.e., indoor competition, relatively novice  
163 opponents, and perfect conditions) her performance suffered. The following extract was taken  
164 from email correspondence where Zara commented on feelings similar to that of “the end of  
165 the world”, after her form during a competition took an unexpected decline. Such a statement  
166 is indicative of the extreme and unhelpful beliefs commonly associated with REBT, in turn  
167 leading to unhealthy emotions and maladaptive behaviors.

168 “60 arrows in the morning were good and then the 60 in the afternoon were not  
169 as good. Some arrows went wayward and I even had a miss. This made me feel  
170 quite sick to my stomach because I felt I was doing the same form etc. I told  
171 another archer who said 'it's not the end of the world' but it kind of felt like that  
172 to me. I checked my equipment; it was fine so it must have been me. Other  
173 archers were puzzled and seem astonished that my arrows could be so off”

174  
175 This discrepancy in performance and psychological control between outdoor and indoor  
176 competitions suggested Zara could be harboring an irrational approach to failure and success  
177 underpinned by demands instead of asserted preferences (Dryden, 2009). Zara was

178 experiencing a somewhat common paradox within high performance sport; the more she  
179 demanded success the harder it became for her to attain. Information collated from the needs  
180 analysis provided sufficient justification that the application of REBT would provide an  
181 appropriate intervention for Zara's case (see Turner & Barker, 2014).

### 182 **The Application of REBT**

183 The central purpose of REBT is to actively challenge and dispute the client's irrational  
184 philosophy and replace it with an effective new rational alternative. REBT is proposed to be  
185 at its most effective on a one-to-one basis, over a series of sessions. The lead author was a  
186 supervised trainee Sport and Exercise Psychologist registered within the Division of Sport  
187 and Exercise Psychology (DSEP), an accredited primary practitioner in REBT, and delivered  
188 the seven one-to-one REBT sessions with Zara. Each session lasted for approximately 60  
189 minutes and was conducted over a 3-month period. The REBT intervention was separated  
190 into education, disputation, and reinforcement phases, guided by the ABCDE framework (see  
191 Figure 1). For an overview of applying REBT in sport see Turner and Barker (2014).

### 192 **Education Phase**

193 The education phase aimed to teach the client that it is their beliefs (B) that determine  
194 their emotional and behavioral consequences (C), rather than the adversity alone (A) (Dryden  
195 & Branch, 2008). Here, an emphasis was placed on ownership and control over Zara's  
196 emotional and behavioral response. Thus, irrespective of the adversity (A), Zara would gain  
197 autonomy over the functionality of her emotions and behaviors through the alteration of her  
198 beliefs (B). Before addressing the beliefs (B), Zara was asked to outline how she would like  
199 to respond (C), a response that would be helpful in the pursuit of her goal of performing well.  
200 Therefore, instead of feeling extremely anxious (dysfunctional emotion) Zara wanted to feel  
201 nervous (functional), display behaviors that were adaptive in regaining her form, and



202 ultimately, revert back to her previous form. The following transcript examples the process  
203 involved in eliciting IBs:

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

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

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

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

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

212

213 This led to establishing the irrational belief: “I would like to perform well when I compete in

214 relatively easy competitions, therefore I must, if not it would be awful, and this would be

215 unbearable for me”. Such a process is then repeated with other challenging situations

216 encountered. Throughout the education phase the client’s emotional responsibility was

217 emphasized, highlighting the B (Belief) – C (Consequence) connection, rather than the

218 adversity (A) being solely responsible for her response (Dryden & Neenan, 2015). To

219 reinforce Zara’s self-awareness an ABC diary was provided as an inter-session task (Ellis &

220 Dryden, 1997). During this phase, it was important to consider factors that influenced the

221 practitioner-client relationship that facilitated the receipt of REBT. From the outset, Zara’s

222 expectations and goals were addressed and regularly reviewed. Throughout the intervention

223 it was important for the practitioner to consider catering the pace of the sessions,

224 interpersonal style (e.g., level of disclosure, humor, formality), and matching the influence

225 base (e.g., expertise, likeability) to Zara’s preference (Dryden & Neenan, 2015). The

226 education phase developed Zara’s self-awareness, moreover it provided the building blocks to

227 access and dispute her core IBs, which can be difficult to access, and stubborn to change.

228 (Neenan & Dryden, 2004). At its early conception REBT was mainly an active-directive

229 therapy. However, contemporary advocates consider that as the REBT intervention

230 progresses, to encourage an active and self-directed client (Dryden & Neenan, 2015).

**231 Disputation Phase**

232 The disputation phase was the most critical aspect of the REBT intervention and took  
233 place over three sessions. Practitioners have typically advised that each session is 45 minutes  
234 or longer in a three-session schedule, to ensure a comprehensive disputation process (Dryden  
235 & Neenan, 2015; Turner & Barker, 2014).

236 Disputing an individual's belief is a challenging and sensitive process. Therefore it was  
237 important for the practitioner to manage the levels of humor (Sultanoff, 2013), as well as  
238 including elements of practitioner self-disclosure, to help normalize Zara's position  
239 (Peterson, 2002). Adopting an ABCDE model, the practitioner rather than disputing the  
240 adversity (A), disputed (D) Zara's existing IBs (B) and strengthened her new effective (E)  
241 RBs, thus promoting healthy emotions, and adaptive behaviors (Ellis & Dryden, 1997).  
242 REBT acknowledges that the adversity (A) is assumed to be true and for the time being  
243 accept that it cannot be altered. The intervention provides an elegant solution instead of an  
244 immediate practical solution allowing the client to better manage and respond adaptively in  
245 any situation that arises, thus promoting long-term fundamental changes. To illustrate, when  
246 Zara became increasingly anxious of her 'poor' performance scores, REBT would not  
247 challenge possible misperceptions over whether it was a poor performance (A). Instead,  
248 through the promotion of her RBs (B) about that situation, REBT would facilitate a helpful  
249 emotion allowing Zara to respond in an adaptive manner. The following extract from Zara  
250 provides an example of an analogy that helped Zara to understand this process:

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

254 From the onset of the disputation phase it was important for the practitioner to manage  
255 Zara's expectations and highlight the challenging nature of the disputation phase. To avoid  
256 confusion and ensure a comprehensive disputation process the practitioner used a directive

257 and formulaic approach to dispute Zara's IBs, starting with the most significant: "I would like  
258 to perform well when I compete in relatively easy competitions, therefore I must, if not it  
259 would be awful and this would be unbearable for me". This process involved three strategies  
260 based upon evidence, logic, and pragmatics (DiGiuseppe, 1991). The following transcript  
261 outlines the initial disputation process, referring to evidence, logic, and pragmatics.

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

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

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

267

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

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

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

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

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

275

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

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

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

279 This disputation process was then repeated with Zara's awfulizing belief (e.g., it would  
280 be awful) and low-frustration tolerance belief (e.g., "this would be unbearable for me"). As  
281 exemplified, Socratic questioning was adopted, in which the practitioner asked a series of  
282 progressive and open questions that encouraged self-reflection (Dryden & Branch, 2008). As  
283 the disputation unfolded Zara verbalized her understanding and agreement of the disputation  
284 process, however, her para-verbal communication conveyed a somewhat uncertain undertone.  
285 Zara became uncomfortable and teary during one session. Indeed, it is common for clients to  
286 harbor doubts during the disputation process, so it was important for the practitioner to elicit  
287 and collaboratively address these doubts (Dryden & Neenan, 2015). Zara voiced her  
288 concerns that releasing this dogmatic demand for success would reduce her motivation  
289 towards archery; this was particularly poignant because for Zara her determination was an

290 attribute she saw as her main strength. This is a common misconception of REBT, where  
291 clients implicitly conclude that through abandoning rigid and dogmatic beliefs this will  
292 reduce their motivation to overcome adversity and reach their intended goal, this being  
293 incorrectly associated with promoting a philosophy of indifference (Dryden & Branch, 2008).  
294 Instead, the new RBs rather than softening the importance of the adversity facilitated a  
295 constructive view of the situation helping them to achieve their goals (Turner & Barker,  
296 2014). The meaningful replacement of Zara's demand with a very strong preference became  
297 her turning point in the REBT program. Accordingly, a set of new and effective RBs (E) was  
298 established: "I really really really want to perform well, but that doesn't mean I have to. If I  
299 don't it is not the end of the world. I will feel rubbish, but I can accept that". After two  
300 sessions of disputing and replacing her IBs with new RBs Zara was able to comprehend that  
301 losing her IBs would not reduce her motivation, instead alleviating a do or die approach,  
302 which had been hindering her performances. The following extract was taken from a follow-  
303 up interview outlining her struggle to dispute and quell her motivational concerns.

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

309  
310 To reaffirm the new RBs the practitioner asked Zara to attempt to dispute the new  
311 beliefs with evidence, logic, and pragmatics. The inevitable failure to dispute the new RBs  
312 helps reaffirm the new RBs and extinguish the old IBs. This disputation process was then  
313 repeated again with other significant IBs. Using the ABCDE framework, Zara understood  
314 that she could largely influence and determine how helpful her emotional and behavioral  
315 responses were when encountering adverse situations. To supplement the ABCDE model,  
316 REBT provides various impactful methods that can be used to dispute the client's IBs (see  
317 Turner & Barker, 2014; Dryden & Neenan, 2015). Specifically, with Zara a 'badness scale'

318 was used to challenge her awfulizing beliefs and help her gain perspective on the major and  
319 minor incidents that she encountered in her life. Zara was asked to place a numerical degree  
320 of badness of a series of example adversities onto a scale between 0-100% (Ellis, Gordon,  
321 Neenan, & Palmer, 1997). The practitioner then provided Zara with a series of sport specific  
322 adversities (e.g., missing an arrow in the final) of which she rated highly on the badness  
323 scale. Following this, Zara was provided with a series of major adversities (e.g., loss of a  
324 loved one) of which she attempted to rate highly on the badness scale. This process  
325 eloquently highlighted for Zara that her perceptions about the severity of the situation were  
326 disproportionate with reality and a dip in performance was not “the end of the world”.

### 327 **Reinforcement Phase**

328         The reinforcement phase is typically introduced towards the latter stage of an REBT  
329 intervention and can be completed concurrently with the first two phases. First, an important  
330 aspect of REBT is to provide homework tasks to help self-reflection and re-affirmation of its  
331 principles (Ellis & Dryden, 1997). Furthermore, cognitive, emotional, and behavioral  
332 methods were used to reinforce and internalize Zara’s rational philosophy. Cognitive methods  
333 involved working through self-help ABCDE worksheets as well as creating rational self-  
334 statements. Incorporating the influential research of Wolpe (1958) REBT utilizes behavioral  
335 assignments allowing clients to actively seek and test out their newly developed rational  
336 philosophies in challenging situations (Froggat, 2005). In this case, Zara was asked to  
337 purposefully approach indoor competitions, where expectations to be successful were high.  
338 Due to the intimate overlap between behavioral, cognitive, and emotive methods (Ellis,  
339 2004), this assignment allowed Zara to cognitively (e.g., “my performance scores dropped a  
340 bit, but it wasn’t awful”) and emotionally (e.g., “It didn’t feel like the end of the world, just  
341 annoyed”) dispute her irrational philosophy with logic, evidence, and pragmatics, as well as  
342 overcoming avoidance tendencies associated with anxiety.

343           As the intervention progressed it was important to gauge how Zara's shift in beliefs  
344 impacted upon her well-being and performance (Turner & Barker, 2014). During what would  
345 be our last session together (7<sup>th</sup>), the practitioner and Zara were able to discuss and reflect  
346 upon the previous six sessions. Zara cited that "it seems ridiculous now looking back at my  
347 previous beliefs", as well as noting she felt very positive about her archery and was enjoying  
348 it a lot more. Whilst, facilitating positive affect is not the primary objective for REBT, it  
349 encourages the client to abandon self-rating and self-esteem, in its place endorsing  
350 Unconditional Self-Acceptance (USA; Chamberlain & Haaga, 2001). USA is defined as "the  
351 individual fully and unconditionally accepting themselves whether or not they behave  
352 intelligently, correctly, or competently, and whether or not other people approve, respect, or  
353 love them" (Ellis, 1977, p. 101). The combination of abandoning self-rating and accepting  
354 herself as a fallible human being may explain why Zara's enjoyment of archery improved.  
355 Additionally, in line with Self-determination Theory (SDT; Ryan & Deci, 2000) Zara's shift  
356 from a 'have to' to 'want to' was likened to a self-determined motivation, a state manifesting  
357 in greater interest, excitement, confidence, and performance (Ryan & Deci, 2000).

358           REBT progressively encourages an active and self-directed client. As a result Zara  
359 was encouraged to become self-sufficient in managing her emotions and behaviors in any  
360 situation. A useful method to gauge and reassert Zara's understanding of REBT was through  
361 'Rational Reverse Role-play' (RRR; Kassiove & Diguseppe, 1975). Here the practitioner  
362 became the client who role-played an athlete with IBs, whilst Zara acting as the practitioner  
363 actively elicited, disputed, and replaced the IBs with new effective RBs. During the seventh  
364 and final session it was evident that Zara had made substantial progress, explicitly reporting  
365 that she was increasingly able to manage challenging situations and that she no longer  
366 required routine one-to-one sessions, instead feeling independent and capable in managing  
367 from there onwards. It was then mutually agreed that no further sessions would be necessary

368 unless Zara requested additional support. Whilst communication was maintained for a period  
369 of two months, no further REBT sessions were completed. REBT provides both a pro-active  
370 and re-active framework. In the case of Zara, REBT provided a brief therapy (Ellis, 2013),  
371 focused on dealing with and resolving Zara's specific issues. In cases where deeper problems  
372 exist a longer program can be provided.

### 373 **Structured Intervention**

374 To ascertain intervention effects, self-report and performance scores were  
375 collected throughout the intervention and at follow-up time points. To provide social  
376 validity, a semi-structured interview was conducted with Zara at the end of the REBT  
377 program (Page & Thelwell, 2013). Questions were oriented around changes in  
378 dependent variables, the intervention process, and objective archery performance  
379 (Hrycaiko & Martin, 1996). To monitor changes in Zara's IBs, the SGABS (Lindner et  
380 al., 1999) was administered at pre-, middle, post-intervention, and at a three and six  
381 month follow-up time points (see Figure 2). Using the SGABS, Zara reported  
382 meaningful short and long-term increases in her RBs and decreases in her IBs. REBT  
383 theory posits that RBs and IBs are not bi-polar constructs (e.g., high IBs does not  
384 signify low RBs; David, Lynn, & Ellis, 2010). Overlapping with the disputation phase,  
385 Zara reported increases in RBs simultaneously with decreases in IBs between sessions  
386 one to five. This long-term maintenance supports the successful application of REBT,  
387 guiding Zara from an irrational to a rational philosophy. Such a shift was reflected in  
388 the following transcript:

389 "I wasn't convinced at the beginning that you could help. I followed what you  
390 said to the letter, slowly I was surprising myself, my mind-set was changing as  
391 well as improving my scores as I went along. I wasn't as anxious when little  
392 issues arose I had those little statements which I carried which helped a lot."  
393

394 IBs are detrimental for psychological well-being, yet within elite sport some  
395 consider IBs to possess motivational qualities (Turner & Barker, 2014). To investigate  
396 this matter, analysis of social validation interview indicated that Zara's motivation for  
397 archery had been maintained, notably highlighting she had been enjoying competition a  
398 lot more. The motivational effect of REBT can be exemplified in the following extract:

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

406 Zara's strength of efficacy beliefs and perception of control scores across 10  
407 performance markers were reported on a scale between 1 (cannot do at all) and 100 (highly  
408 certain can do) on a session-by-session basis (Bandura, 2006). These markers included shot  
409 accuracy, focus, shooting consistency, shooting control, appropriate shot timing, remaining  
410 strong throughout the shot, maintaining composure, producing one continuous movement for  
411 shots, maintaining shooting position, and performing to potential. Zara reported meaningful  
412 short and long-term improvements in self-efficacy and perceptions of control across all 10  
413 markers (see Figure 3). Zara's successful adoption of a rational philosophy, (i.e., the  
414 formation of functional emotions and behaviors) led to greater emotional control and  
415 behavioral functioning. Therefore, in line with the three-dimensional model (Cheng et al.,  
416 2009), it was postulated that Zara's enhanced emotional control led to greater perceived  
417 control in coping and attaining goals when under stress, in turn, supporting the adaptive vs.  
418 maladaptive distinction in negative emotions as proposed by REBT theory.

419 In line with Bandura's taxonomy, an individual's emotional state is proposed to be a  
420 key source of self-efficacy. As a result of the REBT intervention, we hypothesized that



421 increases in emotional control facilitated Zaras self-efficacy beliefs towards archery  
422 performance. Accordingly, developments in both self-efficacy and perceived control were  
423 coupled with meaningful and long-term improvements in Zara's archery performances. Zara  
424 recorded a 9.24% increase in average percentage of maximum performance scores between  
425 nine pre-intervention competitions ( $M=75.64$ ,  $SD=.09$ ) and nine post-intervention  
426 competitions ( $M=84.88$ ,  $SD=.05$ ) (see Figure 4). We propose that such improvements in  
427 performance provided Zara with experiences of successful previous accomplishments, an  
428 important source of self-efficacy subsequently, reinforcing the reciprocal nature of Zara's  
429 efficacy beliefs and performance scores (Bandura, 1997).

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

#### 442 **Considerations for Practitioners**

443 For practitioners the ABCDE framework central to REBT is seemingly simple to  
444 comprehend and both logical and linear within its application. However, it would be  
445 recommended for practitioners considering this approach to gain a broad theoretical and

446 applied understanding (e.g., primary practicum in REBT) before adopting REBT within their  
447 practice. When contemplating the use of REBT practitioners are recommended to consider a  
448 sufficient timescale (5-12 sessions) when providing clients with enough time to understand,  
449 practice and re-affirm the principles of REBT (see Turner & Barker, 2014). It is important to  
450 consider the pace and not overwhelm the client. This can be monitored through on-going  
451 collaborative reflections and reviews of the client's progress. (Grant, Townsend, Mills, &  
452 Cockx, 2009). When applying REBT the practitioner should manage misconceptions of  
453 REBT, mainly the misinterpretation that individuals should adopt a stoic approach; that is an  
454 emotionless and indifference to their predicament or the situation. REBT does not withdraw  
455 negative emotions in response to adversity, instead encourages a helpful and adaptive  
456 response. The process of reaffirming an individual new effective RB's requires long term  
457 diligence from the client, where at the beginning REBT assumes an educational approach,  
458 progressively the practitioner is encouraged to adopt a collaborative client centered approach  
459 (Dryden & Neenan, 2015). This point is illustrated in the following extract:

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

#### 466 **Conclusion**

467 This case study documents the application of an REBT program and its short and long  
468 term effects on an elite level archer. This study provides an insight into common  
469 misconceptions, challenges and guidance for practitioners who may consider adopting it  
470 within their practice. Supporting its core hypothesis it is clear that the case has shown REBT  
471 to be a potentially effective psychological intervention to manage IBs and develop sporting  
472 performance, allowing the athlete to manage and respond adaptively to adversities that they  
473 will inevitably encounter. The maintenance effects found across all dependent variables

474 demonstrate how REBT targets the root of unhealthy and dysfunctional responses to  
475 adversity, thus providing potentially long lasting and curative effects. Whilst not claiming to  
476 be a panacea for all issues athletes may encounter, REBT is elegant in that the framework can  
477 be used across all aspects of life, and not simply limited to sport. Avenues for future  
478 investigation include exploration of the effect of REBT on athletes' motivational approach to  
479 their sport, as well as its influence on positive affect. Additionally, in future, researchers may  
480 wish to explore the effect of REBT used in conjunction with other psychological approaches  
481 and techniques to further facilitate its effect. For example Personal-Disclosure Mutual-  
482 Sharing and REBT can be utilized within group settings (PDMS; Dunn & Holt, 2004), the  
483 use of Motivational Interviewing techniques (MI; Rollnick & Miller, 1995) could be  
484 implemented to strengthen clients' motivation for change, and finally elements of positive  
485 psychology (Seligman, 2012) could be adopted to actively promote positive affect within the  
486 client.

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619 **Figure Captions**

620 *Figure 1. A schematic of the ABCDE framework used within the REBT process.*

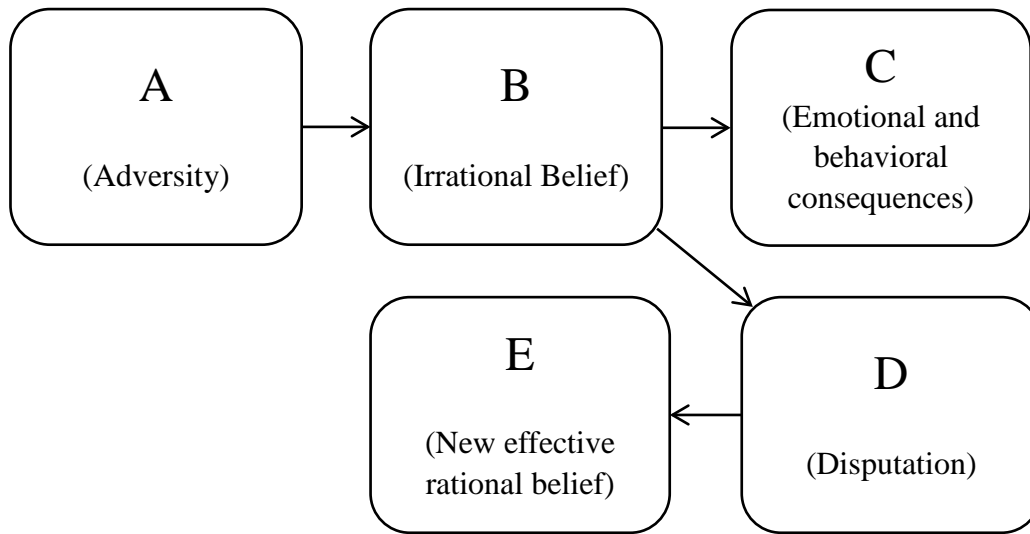
621 *Figure 2. Shortened General Attitudes and Belief Scale (SGABS) scores taken at session one,*  
622 *mid-point, last session and at a 3 and 6-month follow up time point.*

623 *Figure 3. Self-efficacy and control scores for 10 archery specific performance markers taken*  
624 *on a session by session and at a 6-month follow up time point.*

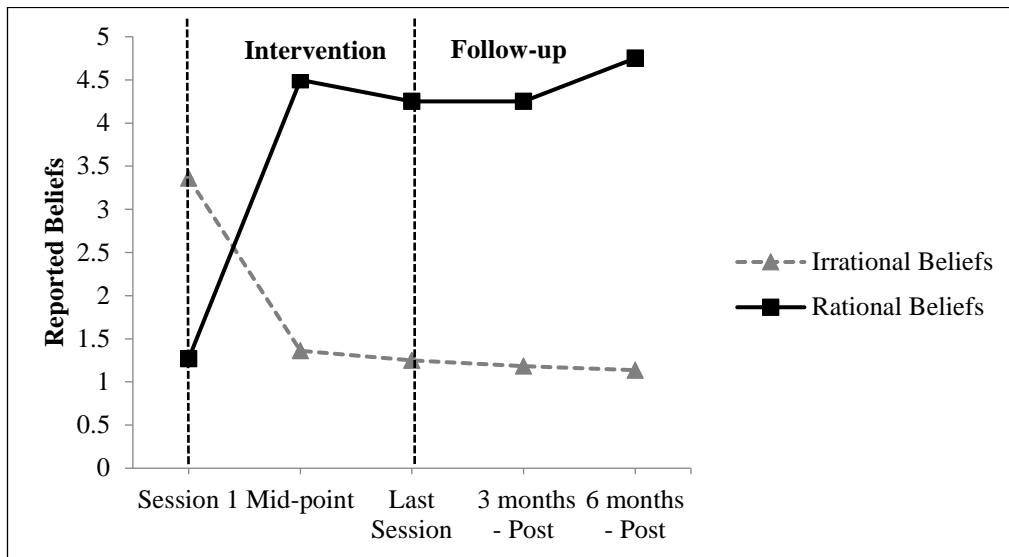
625 *Figure 4. Pre- and Post- Intervention competition performance scores - calculated as*  
626 *percentage of maximum score attainable per competition.*

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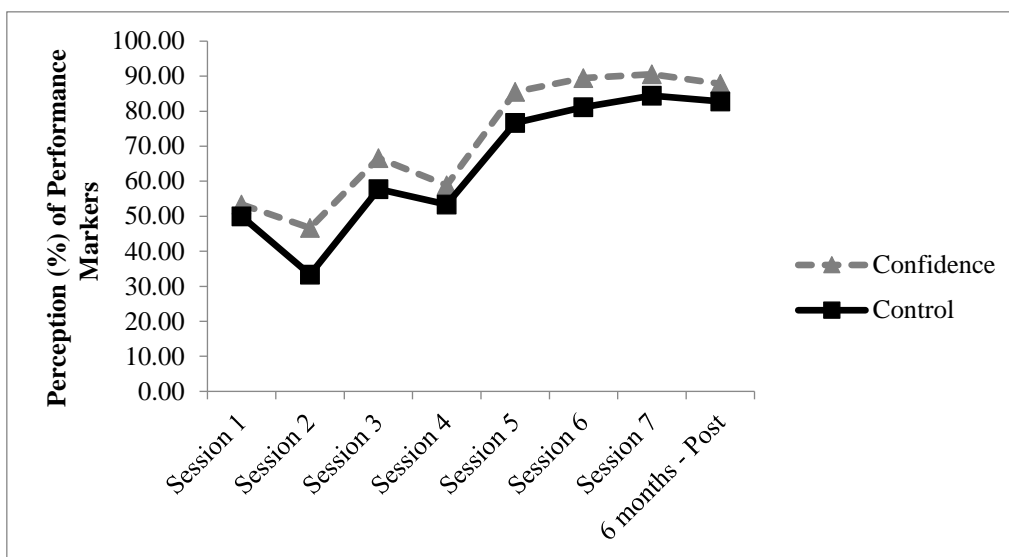
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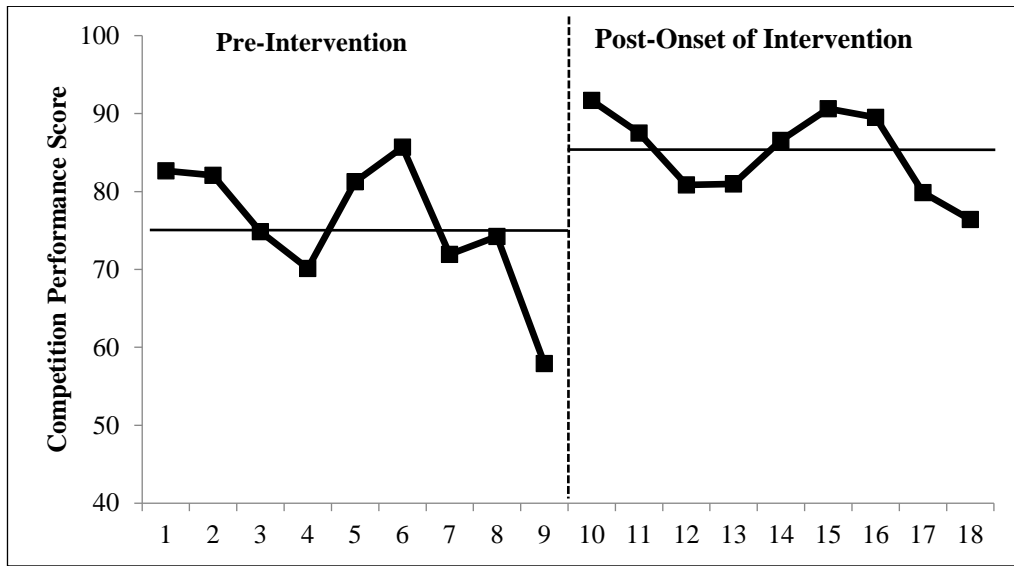
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