

1     **Developing the Effectiveness of Applied Sport Psychology Service Delivery: A Reflective**  
2                                     **Practice Intervention**

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### **Abstract**

Little empirical evidence exists to corroborate the proposed benefits that reflective practice may have for service delivery effectiveness in Applied Sport Psychology (ASP). To systematically address this gap, we collected data over a five-year period via a staggered, single-subject multiple-baseline intervention that aimed to: (a) investigate the effectiveness of a training program designed to enhance practitioners' abilities to engage in higher levels of reflection; and (b) explore whether developments in level of reflection influenced practitioner effectiveness. Eight trainee and four professionally qualified, UK based practitioners participated in an individualized 14-week study, which contained a two week intervention and a two month post-study retention assessment. All participants demonstrated immediate improvements in the level they were able to reflect at, as well as augmented reflective learning following the intervention. Measures of effective practice (e.g., client feedback, self-assessments) also demonstrated improvements post-intervention. In-depth social validation procedures substantiated these findings, with participants reporting that through more critical levels of reflection they experienced enhanced self-awareness, approaches to meeting client needs, professional judgement and decision making, and a range of other characteristics associated with effective consultants. Our findings offer novel support for the links between reflective practice and service delivery effectiveness, as well as a better understanding of the mechanisms through which such adaptations occur. This study makes a significant contribution by providing an in-depth, longitudinal insight into the value of focusing practitioner training on reflective practice as a meta-cognitive strategy to enhance ASP practice.

Key words: reflective practice, professional practice, effectiveness, knowledge-in-action

64 **Developing the Effectiveness of Applied Sport Psychology Service Delivery: A Reflective**  
65 **Practice Intervention**

66 As the field of Applied Sport Psychology (ASP) continues to grow in professional  
67 standing, so too does the basic need for sport psychology consultants (SPC) to be accountable to  
68 those they work with (e.g., clients) and for (e.g., sporting organizations, the profession; Winter  
69 & Collins, 2016). In association, an increasing emphasis has been placed on SPCs providing  
70 services that are ethical, evidence-based, and effective (Keegan, 2016). However, whilst  
71 researchers have explored a range of stakeholders' perceptions of the characteristics of effective  
72 practitioners (e.g., Anderson, Miles, Robinson, & Mahoney, 2004; Chandler, Eubank, Nesti, &  
73 Cable, 2014; Sharp & Hodge, 2014), less is known about the wider concept of effective service  
74 delivery or how it is developed (cf. Fortin-Guichard, Boudreault, Gagnon, & Trottier, 2018).

75 Previously, Cropley, Hanton, Miles, and Niven (2010) investigated a more encompassing  
76 definition of effective ASP practice through focus groups with trainee and professionally  
77 qualified SPCs. The authors reported that effectiveness should be considered as a  
78 "multidimensional process" associated with "meeting the needs of the client" (p. 527). As a  
79 result, characteristics associated with effective SPCs (e.g., good communication; ability to  
80 develop a working alliance; knowledge and experienced; athlete-centered) are thought to  
81 represent the attributes required to engage in this process (Cropley et al., 2010; Fortin-Guichard,  
82 2018). Cropley et al.'s definition also indicated that the process of effective service delivery  
83 requires the active use of reflective practice (RP) to assist SPCs in learning from their  
84 experiences, affording them the opportunity and mechanisms to explore the effectiveness of their  
85 work in a systematic manner. The notion that RP could be an efficacious approach to the  
86 improvement of effective service delivery in ASP has intuitive appeal. Indeed, RP has widely  
87 been linked to: (a) frameworks of ASP service provision (e.g., Keegan, 2016); (b) the  
88 development of practitioners' characteristics associated with effectiveness, including self-  
89 awareness (e.g., Mellalieu, 2017); (c) supporting adaptive coping mechanisms that enhance

90 practice (e.g., Cropley, Baldock, Mellalieu, Neil, Wagstaff, & Wadey, 2016); (d) creative and  
91 innovative approaches to practice (e.g., Schinke et al., 2006); and improved congruence between  
92 philosophy and practice (e.g., Friesen & Orlick, 2010). Advocates of RP within ASP have also  
93 suggested that the concept is intrinsically linked with effectiveness. This is because it facilitates  
94 a practitioner's examination and sense making of their practice, subsequently raising *knowledge-*  
95 *in-action* into consciousness (Knowles, Gilbourne, Cropley, & Dugdill, 2014). Knowledge-in-  
96 action (e.g., a form of knowing that facilitates better practice through the union and interplay of  
97 different sources of knowledge, such as: technical, aesthetical, personal and ethical), developed  
98 through RP, is arguably the most essential form of knowledge as it allows practitioners to  
99 manage and adapt to the dynamic and context specific nature of their work (Huntley, Cropley,  
100 Knowles, & Miles, 2019). Perhaps as a result, RP, which has been considered as a "purposeful  
101 and complex process that ... transforms experience into learning to better understand and/or  
102 improve practice and the situation in which it occurs" (Knowles et al., 2014, p. 10), has been  
103 assimilated into formal training pathways for ASP in the United Kingdom (UK) (e.g., British  
104 Psychological Society [BPS] Chartership). The British Association of Sport and Exercise  
105 Sciences (BASES) has also incorporated a core RP workshop into its accreditation route under  
106 the premise that RP offers a legitimate method for practitioners to question their personal  
107 effectiveness and responsibilities in the delivery of ASP services.

108         Despite such developments, a number of issues exist regarding RP, its place within ASP,  
109 and its potential for facilitating more effective service delivery. First, in a review of the RP  
110 literature in sport, Huntley, Cropley, Gilbourne, Knowles, and Sparkes (2014) found that less  
111 than half of the published articles purporting to consider RP adopted a conceptualization  
112 considered as accurate enough to appropriately represent RP. Definitions of, and approaches to,  
113 RP are often accepted intuitively as a result, making it difficult for practitioners to distinguish  
114 between RP and other modes of thinking (e.g., evaluation; Huntley et al., 2019). Consequently, it  
115 is likely that practitioners believe that they are engaging in RP when they are actually not,

116 affecting the influence of their approach on service delivery effectiveness. Second, it has been  
117 argued that RP can occur at different levels of insight, ranging from technical (i.e. performance  
118 reviews) to critical (i.e. challenging habitual practice; Legare & Armstrong, 2017). Whilst, all  
119 levels of RP are thought to be beneficial to practitioners, authors are in agreement that critical  
120 reflection, which is considered to be a more thoughtful and profound level of RP, facilitates the  
121 transformational adaptations to thoughts and behaviors required to enhance service delivery  
122 effectiveness (Knowles, Katz, & Gilbourne, 2012; Picknell, Cropley, Mellalieu, & Hanton,  
123 2016). Critical RP is, however, a complex, highly skilled, meta-cognitive process that needs to  
124 be developed and nurtured (Knowles et al., 2014). Whilst trainee SPCs are encouraged to engage  
125 in RP during professional qualification programs, with those training through BASES also  
126 required to attend a RP workshop, the impact of these activities on an individual's ability to  
127 engage in critical RP is yet to be studied (Huntley et al., 2019). Finally, explicit links between  
128 RP and the development of service delivery effectiveness in ASP support have not been  
129 investigated directly, with available support being generally implicit in nature (Picknell et al.,  
130 2016). Given the limited evidence detailing the impact of RP on service-delivery, the largely  
131 undisputed inclusion of RP within ASP practitioner training programs could be questioned. For  
132 example, some practitioners may find the lack of rigorously designed empirical research that  
133 demonstrates improvements in practice through RP difficult to align with the current pressure for  
134 engagement in evidence-based practice (Huntley et al., 2019). Indeed, it is noted that whilst  
135 SPCs are encouraged to take ownership of their self-evaluations, the act of reflection is still  
136 often neglected (Picknell et al., 2016). The resistance to buy-in to RP may stem from a lack of  
137 confidence regarding the significance of its impact, triggering a need to be convinced that the  
138 benefits of RP outweigh the commitment required to engage in the process (Picknell, Cropley,  
139 Hanton, & Mellalieu, 2014).

140           The purpose of the current study was to address a number of existing issues associated  
141 with understanding the potential influence of RP on service delivery effectiveness in ASP.

142 Specifically, we aimed to: (a) examine the efficacy of a multimodal training program designed to  
143 develop SPCs' ability to reflect at more critical levels; and (b) investigate whether improvements  
144 in SPCs' RP influenced the effectiveness of their practice. In order to achieve these aims, we  
145 adopted a longitudinal, staggered, single-subject multiple-baseline design, sampling both trainee  
146 and professionally qualified SPCs across a five-year period. In doing so, we aimed to make a  
147 novel and significant contribution to current knowledge by gaining a better understanding of  
148 how we might address the effectiveness of ASP services through the development of the  
149 attitudes and skills required by SPCs for critical RP.

## 150 **Methods**

### 151 **Experimental Design**

152 Single-subject research designs, rooted in radical behaviorism, provide an experimental  
153 structure to explore causal or functional relationships between independent and dependent  
154 variables (cf. Haegele & Hodge, 2015). In light of this, and in accord with the strengths (e.g.,  
155 control over participants' intervention experiences) of single-subject designs, we adopted a  
156 staggered, single-subject multiple-baseline design to achieve the aims of the current study. With  
157 this design, the treatment variable (i.e. the RP training program intervention) is applied to  
158 different participants sequentially after longer and longer baseline phases. If a change in the  
159 dependent variable(s) (i.e. level of RP; effective service delivery) is observed immediately after  
160 treatment, it is implied with confidence that the independent variable and not the passage of  
161 time, or other extraneous factors, caused the observed change (Slack, Maynard, Butt, & Olusoga,  
162 2015). Further, each participant constitutes a complete basis for legitimate conclusions, meaning  
163 that participants also act as their own control, eliminating potential ethical issues relating to the  
164 withholding of potentially performance enhancing interventions (Haegele & Hodge, 2015).

### 165 **Participants**

166 Utilizing criterion-based purposive sampling techniques (Patton, 2015), participants were  
167 selected based on the following criteria: (a) trainee practitioners registered with BASES or the

168 BPS, or fully qualified UK-based SPCs; (b) providing (or about to commence) support to a  
169 client that would continue over the duration of the study; (c) willingness of the participants'  
170 client(s) to provide confidential feedback on the effectiveness of service delivery; and (d)  
171 exposure to, but a basic understanding of, RP. Consequently, only those practitioners who had  
172 not completed formal training in RP (e.g., BASES core RP workshop), and would not engage in  
173 such activities during the study, were included in the sample. Sampling, took place over a five-  
174 year period for two reasons. First, we aimed to provide systematic evidence of the value of  
175 training practitioners' abilities to engage in higher levels of RP for enhancing ASP effectiveness.  
176 It was thought that if similar improvements were experienced by all participants post-  
177 intervention (irrespective of their stage of professional development), who had been sampled  
178 over a number of years, we could try and control for a range of potential organizational and  
179 experiential developments in the field of ASP (e.g., training routes; nature of professional  
180 practice). Second, given the specificity of the sampling criteria, suitable participants were  
181 difficult to locate. In an attempt to offer a significant contribution to understanding in the areas  
182 of RP and effective ASP practice, we wanted to gain what might be considered a large sample  
183 for single-subject designs (cf. Haegele & Hodge, 2015), which consequently took time. Potential  
184 participants were screened via a selection survey and a follow-up telephone interview. Those  
185 meeting the criteria were informed of the nature of the study, as well as their responsibilities  
186 before being asked to volunteer. Details of the final sample, constituting six females and males,  
187 are presented in Table 1.

## 188 **Dependent Variables**

189 **Levels of RP.** In order to establish the necessary criteria for assessing the level at which  
190 participants were able to reflect, a hierarchical reflective rubric was developed (see Table 2).  
191 This rubric was based on the hierarchical models of reflection proposed by Mezirow (1981) and  
192 Powell (1989). Specifically, these authors suggested that RP is a developmental process in which  
193 different levels of reflection exist. As the level of reflection progresses up the hierarchy, it is

194 thought to increase in complexity, require more meaningful engagement and, thus, become more  
195 beneficial for addressing professional practice. The rubric utilized in our study contained six  
196 different levels ranging from *reflectivity* (e.g., descriptive accounts of events) to *critical*  
197 *reflection* (e.g., reflection on issues associated with emancipation and justice) and was used to  
198 score participants' reflections. To standardize the product of participants' RP, foster their  
199 engagement, and allow their level of reflection to be systematically analyzed via the rubric,  
200 participants were asked to engage in a structured, written approach to RP (cf. Knowles,  
201 Gilbourne, Borrie, & Neville, 2001; Kuklick, Gearity, & Thompson, 2015).

202         **Service delivery effectiveness: Consultant performance profile (self-report).** The  
203 knowledge, delivery style, and characteristics of the SPC are suggested to have a central  
204 influence on the overall effectiveness of practice (Anderson, Miles, Robinson, & Mahoney,  
205 2002). Consequently, to examine potential developments in a range of personal (e.g.,  
206 trustworthiness) and professional (e.g., knowledge about how sport psychology relates to sport)  
207 factors thought to facilitate SPCs engagement in the process of effective service delivery (cf.  
208 Cropley et al., 2010), a performance profile assessment was adopted. Although performance  
209 profiles are usually constructed by examining a person's self-perception of aspects constituting  
210 performance excellence, the profiles completed by participants in this study were constructed  
211 through the extant literature focusing on the characteristics of effective consultants in order to  
212 ensure consistency in data collection (e.g., Anderson et al., 2004; Chandler et al., 2014; Sharp &  
213 Hodge, 2014). The performance profile consisted of 25 characteristics, grouped into seven  
214 categories: *personable* (3-items); *good communicator* (3-items); *provider of a good practical*  
215 *service* (5-items); *knowledge* (3-items); *trustworthiness* (3-items); *professional skills* (5-items);  
216 and *attitude* (3-items). Using a Likert scale, participants were asked to rate their perceived  
217 current self-score on each characteristic (1 = low; 10 = high).

218         **Service delivery effectiveness: Client assessment of consultant effectiveness.** The  
219 ability to meet client needs has widely been associated with effective service delivery in ASP



220 (cf. Fortin-Guichard et al., 2018). We asked participants' clients, therefore, to complete a  
221 standardized feedback form. This tool was based on the Consultant Evaluation Form (CEF;  
222 Partington & Orlick, 1987), however, in an attempt make it more representative of modern  
223 practices, some items were removed or re-worded and other items included based on more recent  
224 literature (e.g., Cropley et al., 2010; Haberl & McCann, 2012). The standardized feedback form  
225 consisted of ten-statements (e.g., "The sport psychologist's personal characteristics have a  
226 positive impact on my experience of the support"; and "A good rapport was developed that led  
227 to a positive working relationship") covering a range of factors thought to influence service  
228 delivery effectiveness (e.g., attitude of the practitioner; meeting client needs). Each statement  
229 was ranked on a scale of 0 (not at all) to 10 (yes, definitely). Clients were also asked to rate the  
230 overall effectiveness of the support received on a scale of -5 (hindered/interfered) to +5 (helped  
231 a lot). Finally, for the post-intervention measure, an open-ended feedback section was included,  
232 asking the participants to "comment on noticeable changes in the quality of the support provided  
233 since last completing this assessment."

234       **Social validation.** Social validation in single-subject designs is considered to be a crucial  
235 element in assessing the participants' experience of the intervention, verifying results, and  
236 providing accurate assessment of the internal validity of the findings (Page & Thelwell, 2013).  
237 Consequently, we adopted a semi-structured interview approach to social validation to examine  
238 the perceived mechanisms of the intervention that could help to explain observed behavioral and  
239 cognitive effects (e.g., engagement in higher levels of RP; improved effectiveness). An  
240 interview guide was developed that was split into a number of sections (e.g., pre-intervention  
241 RP; post-intervention RP; influence of RP on effectiveness). It consisted of a set of standardized  
242 questions (e.g., "How did your reflective practices change as a direct result of the training and  
243 support you received?"; "What influence, if any, has the development of your reflective skills  
244 had on the effectiveness of your applied practice?") and neutral, non-directional probes (e.g.,  
245 "Can you provide a specific example?"; "How do you know that this changed?"). This approach

246 provided the interviewer with opportunities to explore participants' experiences and perceptions  
247 of the influence of the intervention on their practice in rich detail (cf. Patton, 2015).

### 248 **Experimental Procedure and Intervention**

249 Institutional ethical approval was awarded for each successive year of the study. The  
250 experimental procedure was divided into four phases: (1) baseline; (2) intervention; (3) post-  
251 intervention; (4) social validation; and (5) retention. Phases one to three lasted for a total of 14  
252 weeks, with phases four and five occurring 48 hours and eight weeks following completion of  
253 the post-intervention phase respectively (see Table 3 for full experimental procedure).

254 Participants were taken through the experimental procedure independently and at different times  
255 of the year in which they took part in the study.

256 At the start of the *baseline phase* participants attended a one-to-one meeting with the first  
257 author to discuss the nature and format of the investigation and to introduce them to the  
258 reflective approach to be adopted. Participants were asked to reflect on one critical consulting  
259 experience per week using a basic RP framework to guide their written reflections (e.g.,  
260 *identification, description, significance, and implications*; Cropley, Miles, Hanton, & Niven,  
261 2007; Ghaye, 2011). Participants were instructed to email their completed reflection on a weekly  
262 basis to the first author for consideration and analysis by the research team. Given the nature of  
263 the effectiveness measures (i.e. participant self-report and client feedback), participants and their  
264 clients were asked to complete the measures immediately prior to moving into the intervention  
265 phase. Participants were provided with electronic links to both assessments and instructed to  
266 complete the self-report performance profile, whilst passing the link to the client assessment tool  
267 onto their clients, who could then complete the assessment confidentially and in their own time.  
268 Using baseline logic (cf. Cooper, Heron, & Heward, 2007), and in accord with the *staggered*  
269 design adopted in our research, the duration of the baseline phase varied across participants.  
270 Further, the phase was deemed completed when the dependent variable (i.e. level of RP) either

271 formed a predictive pattern, was relatively stable, or demonstrated a trend in the opposite  
272 direction of the change anticipated when introducing the treatment (Cooper et al., 2007).

273         The *intervention phase* took place over an intensive two-week period and was designed  
274 based on the understanding that RP is a meta-cognitive strategy that requires a multi-faceted  
275 process of explicit and thoughtful teaching (Ghaye, 2011). Accordingly, the intervention  
276 consisted of: (a) individual tutorials (2 x 120 minute sessions delivered by the first author); (b)  
277 feedback on written reflections; and (c) individualized mentoring. Based on the extant literature  
278 (e.g., Anderson, Knowles, & Gilbourne, 2004; Cropley et al., 2010), tutorial one focused on  
279 improving the participants' knowledge and understanding of RP, its links to experiential  
280 learning, and appreciative approaches to RP. Following this, participants were asked to complete  
281 a number of tasks relating to the information shared during the tutorial, which were discussed at  
282 the start of tutorial two. The second tutorial focused on developing participants' engagement in  
283 RP by considering: (1) reflective questioning; (2) how to make RP more meaningful; and (3)  
284 how to create better links between practice, learning, and future action. Under the premise that  
285 structured reflective writing promotes the qualities (e.g., open mindedness) and skills (e.g.,  
286 critical analysis) required for higher levels of RP, participants were also introduced to an adapted  
287 version of Anderson et al.'s (2004) structured framework for RP. The application of this  
288 approach was discussed in relation to information presented in both tutorials, with participants  
289 being asked to construct their reflections through the more structured framework for the  
290 remainder of the study.

291         In addition to the tutorials, participants were asked to submit one reflection per week  
292 during the intervention phase. These reflections were not included in formal data collection;  
293 instead, they allowed us to provide feedback to the participant regarding the quality of the  
294 reflection (i.e. reflective level). Our feedback focused on assisting participants in the use of the  
295 specific structured process (e.g., adapted version of Anderson et al.'s RP framework), as well as  
296 encouraging them to consider aspects of their reflections in greater critical detail (e.g., "How

297 does this challenge the tradition?”). Participants were then given the opportunity to discuss the  
298 feedback to ensure clarity and ask any additional questions. Further, in light of the potential  
299 importance of guidance and supervision for the development of an individual’s RP (cf. Knowles  
300 et al., 2014), mentoring was provided by the first author to encourage participants’ ongoing  
301 engagement in the study and to continue to develop their abilities to reflect at more critical  
302 levels. The mentoring process consisted of one-to-one conversations every two weeks during the  
303 intervention and post-intervention phases either via telephone or face-to-face. A set of questions  
304 were devised to structure the mentoring conversation (e.g., “What has been a real success for  
305 you regarding your RP?”; “What can you do to ensure that this keeps happening?”) before  
306 giving participants the opportunity to discuss any particular issues concerning their RP.

307         The *post-intervention phase* lasted between four and nine weeks depending on the  
308 duration of each participant’s baseline phase. During this time, participants were instructed to  
309 reflect on one critical consultancy incident per week using the more structured reflective  
310 framework introduced during the intervention. Reflections were emailed to the first author on a  
311 weekly basis for collation and analysis. In addition, participants engaged in the bi-weekly  
312 mentoring process, whereby they received between two and five mentoring sessions depending  
313 on the duration of their engagement in this phase. During the last week of the post-intervention  
314 phase, participants were again instructed to complete the self-report performance profile and  
315 pass an electronic link on to their clients so that they could confidentially complete the client  
316 assessment tool. Finally, participants took part in a social validation interview 48 hours after the  
317 completion of the post-intervention phase. All interviews were conducted face-to-face by the  
318 lead researcher in a neutral setting to aid the flow of conversation and avoid environmental bias.  
319 The interviews lasted between 50 and 82 minutes ( $M = 64.2$ ;  $SD = 10.8$ ), were audio recorded in  
320 their entirety, and subsequently transcribed verbatim yielding 298 pages of transcript.

321         The final phase, *retention*, lasted for two weeks and aimed to explore whether the impact  
322 of the intervention program had a lasting effect on the levels at which participants were

323 reflecting. Participants were asked to submit one written reflection, using a structure of their  
324 choice, on a critical consulting experience during each week of the phase.

### 325 **Treatment of the Data and Procedural Reliability**

326 For the benefit of understanding researcher effectiveness, treatment integrity was  
327 assessed through procedural reliability. Following methods adopted by Neil, Hanton, and  
328 Mellalieu (2013), manipulation checks in the form of a behavioral checklist were employed to  
329 ensure equitable application of the intervention across participants. Here, a list of agreed  
330 procedural steps in the form of a standardized protocol was constructed for the first author to  
331 follow. During the intervention phase, the first author also reflected on the delivery of the  
332 treatment, following which, discussions with the research team took place regarding procedural  
333 reliability to challenge the first author and ensure that consistency was maintained.

334 Assessment of the data occurred in four phases. First, following procedures adopted by  
335 Knowles et al. (2001), authors one, three, and four independently scored participant reflections  
336 (baseline and post-intervention phase) using the hierarchical rubric (Table 2). The entire  
337 research team then met to discuss the independent scores until a consensus on the final score for  
338 each written reflection was achieved. Second, baseline and post-intervention *levels of reflection*,  
339 *participant performance profile* (mean scores were calculated for each category of  
340 characteristics), and *client assessment of effectiveness* scores were tabulated. Third, in  
341 agreement with the procedures adopted by Neil et al. (2013) and due to practical significance  
342 being deemed more important than statistical significance in the current study, data were  
343 visually inspected to determine whether an experimental effect had occurred (cf. Cooper et al.,  
344 2007). Accordingly, the effect of a treatment can be established through visual inspection when  
345 the following conditions are satisfied: (a) a stable baseline; (b) consistency of effect across  
346 participants; (c) few overlapping data points between baseline and intervention phases; (d) how  
347 soon the effect occurred after the intervention; and (e) the magnitude of the effect following the  
348 intervention (Haegele & Hodge, 2015). Finally, reflexive thematic analysis (cf. Braun & Clarke,

349 2019) was used to content analyze the social validation interviews. Initial coding, comparative  
350 analysis, and the creation of descriptive and overarching interpretive themes were completed  
351 independently by authors one, three, and four. Critical discussion then took place between these  
352 authors to establish consensus over the themes relating to: (a) participants' experiences of the  
353 intervention; and (b) their perceptions of the impact of RP on service delivery effectiveness. The  
354 final themes were presented to the entire research team, who, acting in the role of critical  
355 friends, encouraged reflection on the data, the actively created themes and their definitions. This  
356 process allowed the researchers to improve confidence in the process and outcomes of the  
357 analysis (Smith & McGannon, 2018).

## 358 **Results**

### 359 **Intervention Effects on Levels of Reflection**

360 The level at which all participants were able to reflect increased from the baseline to  
361 post-intervention phase immediately after the administration of the intervention (see Figure 1).  
362 Few overlapping data points were also recorded, with only scores from participants 7 and 10  
363 demonstrating one overlapping data point each, signifying a very high experimental effect (cf.  
364 Slack et al., 2015). Further, whilst varied across participants, baseline scores for RP were  
365 typically characterized by lower levels of reflection, resulting in descriptive accounts of  
366 practice, awareness of the feelings associated with the outcomes of the support sessions being  
367 reflected on, and in some instances, assessment of decision making processes, learning and the  
368 consequences for practice. Post-intervention, levels of RP appeared to increase considerably, as  
369 demonstrated through the trend lines plotted on Figure 1. Only five participants (3, 6, 9, 10 and  
370 11) demonstrated the ability to reflect at the most critical level of RP, although other participants  
371 demonstrated substantial improvements. Post-intervention reflections were typically categorized  
372 by clear assessments of learning, implications for future action, and the questioning of habitual  
373 practices. Thus, confidence can be established in the experimental effect, indicating that the  
374 intervention had a direct impact on participants' ability to engage in higher levels of RP.

**375 Levels of Reflection Follow-up Retention**

376 Eight participants (1, 2, 3, 4, 5, 8, 9 and 10) maintained levels of RP two months post-  
377 intervention, signifying a retention effect for those SPCs. Scores for the remaining participants  
378 (6, 7, 11 and 12) indicated overlapping data points with the baseline phase, which signifies a  
379 decrease in the level of RP reported between the post-intervention and retention phases.

**380 Assessments of Service Delivery Effectiveness**

381 **Consultant performance profile (self-report).** The mean scores for the categories of  
382 consultant effectiveness characteristics are presented (see Table 4; findings for individual  
383 characteristics available upon request). All participants demonstrated at least some positive  
384 developments in mean category scores from the baseline to the post-intervention phase, with  
385 participants 2, 5, 9, 11 and 12 reporting perceived increases across all categories. Fewer  
386 developments were generally experienced within the categories of *trustworthiness* and *attitude*,  
387 with greater increases perceived by the majority of participants in *exhibits professional skills*,  
388 *good communicator*, and *knowledgeable*. Mean scores for the collective categories indicated  
389 improvements from the baseline to post-intervention phase for all participants, suggesting some  
390 development in participants' characteristics associated with effective service delivery.

391 **Client assessment of consultant effectiveness.** Consultant effectiveness factor scores as  
392 rated by the participants' clients are presented in Table 5. All participants experienced increases  
393 in some individual factor scores from the baseline to the post-intervention phase. No participants  
394 received increased scores post-intervention in all individual factors. However, mean scores for  
395 the collective factors did increase in the post-intervention phase for all participants, signifying  
396 that participants were generally perceived by their clients as demonstrating higher levels of  
397 factors associated with effective service delivery following the intervention. Further, the clients  
398 of nine participants reported increases in the *overall effectiveness* item score post-intervention,  
399 with the remaining three participants (7, 10 and 12) being awarded the same score for both  
400 baseline and post-intervention measures. In the post-intervention measure, clients were also

401 asked to comment on any noticeable changes in the quality of the support provided since last  
402 completing the assessment of consultant effectiveness. Seven out of the twelve clients  
403 responded. Four clients commented on changes to the participants' attitudes towards the  
404 support. For example, "More recently, xxx (name) seems to be far more positive about things  
405 than when we started the support. He seems more open to my feedback and to working with me  
406 in the way I want", and, "xxx (name) is far more flexible now than before. Because of my  
407 training schedule things are difficult to plan, but now xxx (name) seems more accepting of that  
408 and works around me far more." Two clients commented on the participants' developing ability  
409 to meet their particular needs. For example, "The support is more bespoke now. To start I felt  
410 like I was getting a standard package, but now everything seems more focused on me and my  
411 strengths." Finally, one participant referred to developments in the participant's communication,  
412 "At the start some of the things xxx (name) said were difficult to follow, the technical terms. We  
413 talked about this and she's far better now in terms of explaining everything so that I can  
414 understand."

#### 415 **Social Validation**

416 In support of the experimental effects of the intervention, social validation data are  
417 presented in two sub-sections: (a) value of the intervention on levels of RP; and (b) impact of  
418 higher levels of RP on effective service delivery. A selection of representative participant quotes  
419 are provided to offer insights into the raw data and the participants' experiences (Patton, 2015).

420 **Value of the intervention on levels of RP.** All participants reported the value of the  
421 intervention in helping them to: (a) better understand the concept of RP; (b) enhance their  
422 knowledge of and skills in RP; (c) engage in more in-depth meta-cognitive processes; and (d)  
423 augment reflective learning outcomes. For example, "If I had reflected the way I was reflecting  
424 at the end (post-intervention) at the beginning it would have been a better consultancy process  
425 throughout because I would have learnt more from each experience" (participant 3); and, "I  
426 wasn't getting as much from reflection in the early stages as what I've got from it following the



427 intervention” (participant 8). Further, when asked to comment on their experiences of the  
428 training they received, all participants acknowledged their satisfaction with the intervention and  
429 the overall benefit it had on their reflective and professional practices. Indeed, participants  
430 widely considered that as a result of the intervention their ability to engage in RP improved. For  
431 example, “I thought that (intervention) made the difference in terms of changing my perceptions  
432 of reflection and in terms of me actually getting benefits from it (reflecting)” (participant 9);  
433 and, “Had there not been an intervention I wouldn’t have gotten the same gain both in terms of  
434 my ability to reflect and how I’ve used it (reflection) to improve my practice and myself”  
435 (participant 1); and, “I found the intervention really rewarding in that it enthused my appetite for  
436 better reflection and in getting better at critically examining my consultancy I feel as though I’ve  
437 learnt a lot about me and my practice” (participant 8).

438 Participants acknowledged the value of the tutorials in helping them to gain a better  
439 understanding of RP and the processes involved with the concept. Specifically, participants  
440 reported, “They (tutorials) added clarity and provided the opportunity to ask questions and gave  
441 me the opportunity to get more information (about reflection) ... without them I wouldn’t have  
442 improved as much” (participant 11); and, “What I wanted to know was ‘how was I going to be  
443 most effective at reflecting?’ The tutorials helped to enhance my understanding of that process  
444 and made me see reflection completely differently” (participant 9). Participants also reported  
445 that the tutorials helped to “reinforce” what was already known about RP and emphasized what  
446 they were already doing well, “The tutorials certainly helped ... I started to understand the links  
447 better between critical analysis and better practice. But they also helped to reinforce what I was  
448 already doing and what I need to do to make it more consistent” (participant 10). Nine  
449 participants also highlighted that the introduction of a framework of reflective questions was of  
450 particular benefit to them as it helped to guide their reflections and encouraged the consideration  
451 of their experiences in greater depth. One participant highlighted, “I think the structured  
452 questions definitely gave clearer outcomes, so it became clear that these were my options and

453 previously I wasn't able to get that far in my reflection" (participant 4). In support, participant  
454 11 added, "They (questions) encouraged you to dig deeper and after being prompted I think I  
455 almost continued to do that (question) myself." Other participants reported that the more  
456 structured RP framework helped them to be more consistent with the level they reflected at, and  
457 altered the focus of their reflections. For example, "(Using the structured framework) I  
458 approached reflecting a lot more deeply and it almost helped me in consultations as well because  
459 by reflecting on the previous experience I was able to use that in future consultations"  
460 (participant 6); and, "I think I got more consistency using the framework introduced during the  
461 tutorials. It helped to focus my thoughts and be more purposeful" (participant 2); and, "I started  
462 reflecting more widely on issues I'd not considered before. This helped me to explore critical  
463 aspects of practice and question my work, which prepared me to improve" (participant 3).

464 The feedback participants received on their reflections during the intervention was  
465 deemed to be beneficial for the development of their RP, as well as for helping participants to  
466 engage more critically in the reflective processes. For example, participant 8 suggested that the  
467 feedback they received helped them to "get the bigger picture" with regards to understanding  
468 and learning from their experiences. Further, participant 4 stated, "I think the feedback you gave  
469 on one of my reflections ... the fact that you just kept asking more probing questions made me  
470 ask myself more positive questions and I was able to then reflect more profoundly."  
471 Importantly, the participants accepted that the feedback did not coerce them into certain  
472 behaviors or ways of thinking but rather "acted as a guide" to help them consider their  
473 experiences in greater critical depth. For example, participant 1 outlined, "When you gave the  
474 information back you were guiding by saying 'think about this' and I found that made the  
475 process a lot easier for the next reflection ... it's guidance as opposed to forcing." Finally,  
476 participants acknowledged the value of the mentoring resource in helping them to reach higher  
477 levels of reflection, leading to more meaningful learning from their RP. For example,  
478 participants detailed, "Having our (participant and researcher) conversations about my

479 reflections helped to reassure me that I was on the right lines, and encouraged me to dig a little  
480 deeper, to ask further questions about certain areas” (participant 3); and, “Having that contact  
481 with you (researcher) definitely improved the quality of my reflections, because I had that safety  
482 net of being prompted to consider things in different ways” (participant 1); and “The mentoring  
483 resource was really powerful for me because it reinforced my approaches and allowed us  
484 (participant and researcher) to talk about my reflection more widely” (participant 12).

485 **Impact of higher levels of RP on effective service delivery.**

486 A range of specific benefits associated with improved service delivery effectiveness  
487 were reported as a consequence of participants’ enhanced ability to engage in RP. Generally,  
488 participants stated, “Becoming more adept at reflection definitely helped to improve my practice  
489 because I engaged in a higher level of thinking that encouraged me to consider the situation and  
490 how I could improve the effectiveness of what I was doing” (participant 2); and, “My practice  
491 has become more effective in my opinion and I think that’s largely down to changes in the way I  
492 reflect and learn from what I’ve done” (participant 12); and “When you question what you’ve  
493 always done and what the field prescribes you realize that there’s better ways and that’s been  
494 key for me and the effectiveness of what I do” (participant 3). Finally, the impact of  
495 improvements in the level RP on the effectiveness of ASP practice was clearly summarized in  
496 the following statement:

497 After the training I really started to think about reflection in a different way, beginning to  
498 question some of the things that I’ve valued and some of the applied literature and this  
499 developed my practice more so than ever before. I think that’s helped me to become a far  
500 better practitioner as a result (participant 3).

501 In relation to these comments, participants indicated that the ability to reflect at higher levels  
502 resulted in improvements to: (a) self-awareness; (b) professional judgement and decision  
503 making; (c) approaches to practice that meet client needs; and (d) a range of consultant  
504 characteristics associated with effective practice.

505 In consideration of the impact of higher levels of RP on burgeoning self-awareness,  
506 participants reported, “I became more aware of how my emotions fluctuated by being more  
507 knowledgeable and deep in my later reflections” (participant 7); and, “After the intervention my  
508 reflections really developed and I think I’ve become more self-aware as a result. That awareness  
509 of my strengths particularly has had a huge impact on how I operate” (participant 8). Other  
510 participants explicitly acknowledged how improved levels of self-awareness influenced service  
511 delivery effectiveness, “I became more aware of how I was feeling and how that influenced my  
512 reaction to the client. This allowed me to use coping strategies to remain neutral, which helped  
513 my effectiveness more than if I hadn’t become more reflective” (participant 11); and “Through  
514 my later reflections I started to learn more about myself and how I could facilitate deeper  
515 discussions and interactions with my client. Until we went through the reflective training I  
516 didn’t realize how important self-awareness is.”

517 Eight participants also specifically discussed how improving their abilities to reflect at  
518 higher levels resulted in a better understanding of their professional judgement and decision  
519 making. This related to participants becoming more aware of their *in vivo* decision making and  
520 the underlying principles on which they were being made, as well as considering the way in  
521 which they reacted and coped during practice. Participants stated, “It (improved ability to  
522 reflect) made me understand the reason why I made certain decisions, not just whether the  
523 decision was the right one. That made me more aware of how I was during a session”  
524 (participant 1); and, “After the training I felt more satisfied with reflecting, I felt I got more out  
525 of it in terms of helping me put into perspective what I was choosing to do and how I was  
526 choosing to do it” (participant 4); and, “Getting better at reflecting on the choices I made before  
527 and during my consultancy sessions really helped me to plan better and be more evidence-based  
528 ... I suppose that made me feel more effective (participant 5).

529 Participants widely reported that they were in a better position to comprehend, develop,  
530 and implement new approaches to service delivery that helped to enhance the effectiveness of

531 their practice as a result of reflecting at higher levels. For example, participants reported,  
532 “Reflection between sessions equipped me better to handle some quite difficult information and  
533 implement a new approach more effectively than if I hadn’t reflected at that level because I  
534 became aware of my feelings and more comfortable with them” (participant 7); and, “I stopped  
535 automatically thinking that what I was doing was right and considered alternatives, which made  
536 me become more client-centered and able to respond better to the client with different  
537 approaches” (participant 5). A range of participants also acknowledged that developments to  
538 their abilities to engage in RP facilitated both greater goal achievement in relation to meeting the  
539 needs of the client and the ability to (re)formulate goals in response to changing client needs.  
540 Specifically, “I’m gaining more information as a result of the reflective training, which means  
541 I’m getting more from the athlete in order to give more rounded options and achieve the goal of  
542 improving their performance” (participant 1); and, “I started to reflect quite critically on whether  
543 my interventions and approach was really what was needed. They (reflections) helped me to  
544 become goal and client focused, which I think has been useful” (participant 2); and, “I think she  
545 (client) would’ve been happy stopping after she gained control over her behavior, but reflecting  
546 more critically I realized that we needed to spend time understanding the reasons why she  
547 behaved in that way to prevent future issues (participant 10).

548         Finally, participants discussed how engaging in higher levels of RP helped them to  
549 develop their personable characteristics (e.g., ability to develop a rapport), communication  
550 skills, knowledge and understanding of sport psychology, professional skills (e.g., decision  
551 making skills), and practical skills (e.g., ability to apply theory to practice). For example,  
552 concerning developing personable characteristics, participants commented, “Because its  
553 (reflecting) encouraged me to be more open in my questioning it’s been helpful for gaining  
554 information and developing that rapport. I think the ability to do that has come through the  
555 reflective training” (participant 6); and, “Improving my reflections has made me more aware of  
556 my feelings so I know not to let nerves impact the information that I give and that will help my

557 effectiveness in that first meeting and creating a rapport” (participant 8). Further, in relation to  
558 communication, participants outlined, “It (effective questioning) helps me tease more  
559 information out of the client which gives me a better understanding of the situation or the issue,  
560 which means I can provide a better service” (participant 5); and, “(As a result of improved RP) I  
561 think I’ve learnt to use more colloquial language and the sporting terms that the client really  
562 understands and I think this has helped her engagement in the process.” In relation to  
563 professional skills participants commented, “I’m learning now when to guide them (client) and  
564 when to say ‘try to work it out for yourself’ and that’s come from reflecting more deeply  
565 because of the process we’ve (participant and researcher) been through” (participant 2); and  
566 “Through reflecting in the more structured way I think I’ve started to develop the knowledge  
567 and insight required to be really perceptive to the client’s feelings and expressions” (participant  
568 4). Participants also suggested that developing their practical skills enabled them to adopt more  
569 innovative approaches to problem solving during practice. For example, “There’s only so many  
570 times you can do the same thing so that’s made me want to understand how I can provide  
571 something different to my athletes, and if I wasn’t reflecting on that I would never make those  
572 changes” (participant 11). Participants were in agreement that such developments to  
573 characteristics associated with effectiveness were a direct result of being able to reflect more  
574 critically on their experiences. Although participants mentioned that such changes may have  
575 occurred as a natural consequence of practicing, they suggested that the improvements would  
576 not have happened as quickly or to the extent that they did without developments to their RP.

### 577 **Discussion**

578 Researchers have suggested that despite the intuitive appeal of RP as a mechanism to  
579 facilitate personal and professional development, little empirical evidence exists to support the  
580 potential links between RP and improved service delivery effectiveness (Cropley, Miles, &  
581 Knowles, 2018; Picknell et al., 2014). To address this gap, we explored the treatment effect of  
582 an evidence-based, multimodal RP training program on participating SPCs’ (trainee and

583 professionally qualified) abilities to engage in higher levels of RP and the subsequent impact of  
584 this on the effectiveness of their practice. By satisfying the five visual inspection criteria that  
585 guided our staggered, single-subject multiple-baseline experiment (cf. Haegele & Hodge, 2015),  
586 our findings demonstrated that all participants were able to engage in higher levels of RP post-  
587 intervention. Linked to these developments, participants also experienced improved service  
588 delivery effectiveness, indicated through a range of self-report and client assessment factors,  
589 which was corroborated with qualitative client feedback and in-depth social validation  
590 responses. Specifically, participants reported that reflecting at higher levels enabled the  
591 development of self-awareness, professional judgment and decision making, and a range of  
592 personal and/or professional characteristics required to better address client needs.  
593 Consequently, we have provided novel support for the value of SPCs receiving systematic RP  
594 training, the impact of reflecting at higher levels of insight, and the efficacy of RP for  
595 facilitating service delivery effectiveness in ASP.

596 Sly, Mellalieu, and Wagstaff (2020) suggested that SPCs must continue to develop  
597 theoretical and tacit knowledge, as well as functional competencies, to be able to practice  
598 effectively across the diversifying ASP consultancy landscape. In accord with this, the findings  
599 or our study have demonstrated that RP offers a valuable meta-cognitive strategy targeting the  
600 personal and professional development required to be able to better meet client needs. Indeed,  
601 meeting client needs is thought to be fundamentally linked to the concept of effective service  
602 delivery (Cropley et al., 2010; Fortin-Guichard, 2018). Through our research, we have  
603 highlighted the importance of SPCs being able to reflect at higher levels of insight to facilitate  
604 this process. There has been considerable debate in the RP literature concerning the nature and  
605 importance of critical levels of reflection, with some authors indicating that the use of  
606 hierarchical RP frameworks potentially devalue lower levels of reflection (cf. Huntley et al.,  
607 2019; Knowles et al., 2014). Nevertheless, critical reflection is proposed to be both  
608 emancipatory (e.g., frees individuals from constraining influences) and transformational (e.g.,

609 enlightens and empowers individuals to address and improve thoughts and behaviors), whereas  
610 lower levels of reflection are more concerned with issues of efficiency and accountability (e.g.,  
611 evaluating whether certain actions achieved the desired outcome; Cropley et al., 2018). More  
612 critical levels of reflection that alter the focus, content, and quality of reflections from trivial to  
613 potentially profound may be required, therefore, to achieve the cognitive and behavioral  
614 adaptations necessary to enhance service delivery effectiveness (Picknell et al., 2016). Our  
615 findings support this contention as participants reported significant alterations to the focus of  
616 their reflections when starting to engage in higher levels of RP post-intervention, ultimately  
617 resulting in augmented reflective learning outcomes.

618         Although our findings indicated a large experimental effect for levels of reflection for all  
619 participants, only five were able to achieve the highest level of reflection sporadically (*Level 6:*  
620 *Critical reflection*), with an additional participant engaging in critical reflection during the  
621 retention phase. It has been suggested that being critically self-aware is an acquired skill that  
622 comes with experience and great intellect and, this being the case, not every individual is  
623 necessarily capable of engaging in critical reflection (Cropley et al., 2018). Other authors have  
624 suggested that individuals may be discouraged from reflecting at a critical level as it can lead to  
625 feelings of discomfort and vulnerability due to an individual's deeply held values and beliefs  
626 being brought into question (Anderson et al., 2004). Nevertheless, higher levels of reflection,  
627 including critical reflection, appear more beneficial for facilitating improvements to practice. As  
628 a result, SPCs and those responsible for the training and supervision of practitioners must  
629 commit to the developmental strategies required to improve the attitudes and skills necessary for  
630 an individual to be able to engage in higher levels of RP (Huntley et al., 2019). Indeed, our  
631 findings support the need for evidence-based, multimodal training programs to facilitate better  
632 engagement in RP. What appeared particularly beneficial in the current study was the structured  
633 approach to RP adopted post-intervention, and the mentoring support provided to participants.  
634 Specifically, participants reported that the structured approach provided them with the necessary



635 prompts to consider their experiences in critical detail, rather than simply pondering over  
636 descriptive information. Further, participants valued the opportunity to discuss their RP with a  
637 mentor (first author), which enhanced their understanding of RP and encouraged deeper insights  
638 into their practice. In support of these findings, Marshall (2019) argued that RP is an integrative  
639 and active process that is facilitated through writing and discussion. These mechanisms are  
640 thought to surface internally represented ideas, allowing an individual to make sense of their  
641 experiences in a way that encourages learning, which, when integrated into future action,  
642 improves practice (Knowles et al., 2001). It is therefore permissible to argue that participants in  
643 our study could have potentially achieved critical levels of reflection more consistently during  
644 the post-intervention and retention phases, if additional data collection time, and thus more time  
645 to engage with the structured RP framework and mentoring opportunities, was provided.

646         The findings of our research have shown that improving SPCs' abilities to engage in RP  
647 can facilitate development along two dimensions: *attitudinal* (e.g., modification of practitioners'  
648 attitudes towards their work) and *functional* (e.g., improvements in the processes of ASP  
649 practice). For instance, from an attitudinal perspective, participants reported that they were able  
650 to gain better access to and make greater sense of their thoughts, feelings, and behaviors in the  
651 specific environments in which they worked. Such benefits support those that have been  
652 outlined in personal accounts of SPCs engaging in RP (e.g., Anderson et al., 2004; Cropley et  
653 al., 2007). Attitudinal developments experienced by the participants in this study were linked to  
654 developing a greater self-awareness, which is considered as an influential psychological process  
655 that can facilitate positive personal adaptations (e.g., development of characteristics associated  
656 with effectiveness), support professional outcomes (e.g., meeting client needs), and develop  
657 practitioner expertise (Mellalieu, 2017). From a functional perspective, participants commonly  
658 reported that reflective learning outcomes focused on gaining knowledge and understanding of  
659 what actually works in practice, which supported improvements to their professional judgement  
660 and decision making. Accordingly, this supports the notion that RP allows individuals to make

661 sense of and learn relevant knowledge-in-action contributing to developing personal theories  
662 about the most effective methods of practicing in a specific context (e.g., Anderson et al., 2004;  
663 Knowles et al., 2012). Collectively it appears that these attitudinal and functional developments  
664 encouraged our participants to consider the professional framework they employed as SPCs. For  
665 example, the majority of clients rated participants higher on their ability to *adopt a client-*  
666 *centered approach* and *meeting client needs* after the intervention. Further, during the social  
667 validation, a number of participants revealed that they felt better able, and more inclined, to  
668 adopt client-centered approaches to practice following the intervention as a result of increases in  
669 their self-awareness triggered by higher levels of RP. Such developments echo the idea that RP  
670 can offer a path towards a humanizing, person-centered approach to care, which has become  
671 almost synonymous with commentaries on effective ASP service delivery (e.g., Anderson et al.,  
672 2004; Marshall, 2019; Sly, 2020).

### 673 **Summary and Future Research**

674 This study supports the notion that RP offers a genuine approach for fostering change in  
675 SPCs' professional action. Specifically, the intervention administered in this study across a  
676 number of years, had a positive experimental effect on the levels participants were able to reflect  
677 at and this consequently had a positive influence on the effectiveness of participants' practice  
678 (as perceived by the participant and their client). These findings, substantiated through  
679 quantitative measures of service delivery effectiveness and social validation procedures, provide  
680 substantial, rigorous, and novel support for the notion that RP can function as a mechanism for  
681 improving service delivery effectiveness in ASP. Support was also offered for the importance of  
682 systematically educating practitioners about RP, as well as explicitly developing the attitudes  
683 and skills required for higher levels of RP. In agreement with Sly et al. (2020), who  
684 recommended ongoing learning for all practitioners to constantly address the competence and  
685 effectiveness of their practice, we extended this support to practitioners at all stages of  
686 development. Indeed, few differences were observed in the current study between trainee and

687 professionally qualified practitioners, suggesting a need for ongoing facilitation of RP in all  
688 SPCs and not just those neophyte practitioners undergoing formal training (cf. Huntley et al.,  
689 2019). Organizations responsible for professional qualifications in the field (e.g., BASES, BPS,  
690 AASP) should, therefore, consider the value of multimodal interventions to provide a range of  
691 strategies for engaging individuals in the reflective process, rather than relying on a one-size fits  
692 all approach. Thus, endorsers of RP should communicate an array of methods that can  
693 encourage enhanced critical engagement in RP. Researchers should consider conducting  
694 systematic evaluations of organizational interventions to explore practitioners' experiences and  
695 perceptions regarding the utility of the intervention for developing their ability to reflect at  
696 higher levels of insight. The impact of developing the attitudes and skills required for critical RP  
697 on professional practice should also be examined in an attempt to grow what is at present a  
698 limited evidence-base (Picknell et al., 2016).

699         Finally, the landscape of ASP service provision is rapidly changing (cf. Sly et al., 2020).  
700 Consequently, the ways in which effective ASP practice is defined, understood and measured is  
701 also likely to evolve. Addressing service delivery effectiveness is, nevertheless, an ongoing and  
702 pressing need to ensure that practitioners can be held accountable to the multitude of  
703 stakeholders they work with and for (Fortin-Guichard et al., 2018). Informed by the extant  
704 literature, we adopted self-report and client measures of effectiveness in this study. In doing so,  
705 we potentially overlooked a number of influencing factors such as *client performance* and the  
706 *organizational fit* of the practitioner. Researchers may therefore wish to explore both the  
707 concept of effective service delivery and the potential impact of RP on these wider effectiveness  
708 factors. Given the findings of the current study, RP certainly appears to offer an efficacious  
709 approach to improving SPCs' effectiveness, and so ongoing investigations are warranted.

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815 **Table 1.** Participant information  
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Year of Participation	Participant	Gender	Age	Affiliate Organization	Status	Experience / Year of Training	
1	1	Male	22	BPS	Trainee	2	
	2	Female	22	BASES	Trainee	1	
	3	Female	30	BPS	Chartered	3	
	4	Male	28	BPS	Chartered	3	
2	5	Female	21	BASES	Trainee	1	
	6	Female	24	BASES	Trainee	1	
3	7	Female	35	BPS	Chartered	8	
	8	Male	22	BASES	Trainee	1	
4	9	Male	25	BASES	Trainee	1	
	10	Female	23	BASES	Trainee	2	
5	11	Male	23	BPS	Trainee	1	
	12	Male	29	BPS	Chartered	3	
		<i>M<sub>age</sub></i> ( <i>SD</i> )	25.7 (4.09)			Chartered <i>M<sub>exp</sub></i> ( <i>SD</i> )	4.25 (2.5)

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818 **Table 2.** Hierarchical levels of reflection rubric  
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Level	State Description	Criteria
1	Reflectivity	Awareness, observation, description <i>Description of the nature of the session</i>
2	Affective reflectivity – Consultant / Client	Awareness of the consultants own feelings and/or the client’s feelings <i>I followed by analysis of feelings, e.g. consultant feeling happy/disappointed about session outcome, client feeling anxious about what is being asked of them</i>
3	Discriminant reflectivity - Reflection on relationships between principles and practice	There is an assessment of decision making processes, the implications and consequences of actions, and self-beliefs/values as well as the underlying rationale for practice <i>1, 2, and understanding of the influence of approach/framework adopted on the outcome of the situation – recognition of alternative approaches</i>
4	Conceptual reflectivity	Assessment of learning has taken place and/or identification that further learning is required to assist in decision making <i>1, 2, 3 and recognition of the learning emerging from the process and/or recognition of the need for further learning to address the issues in question.</i>
5	Theoretical critical reflectivity	Awareness that routine or taken-for-granted practice may not be the complete answer, obvious learning from experience or change in perspective <i>1, 2, 3, 4 and consideration of the experience in the context of what has been learnt and how this may influence future practice, as well as the actions required to use knowledge from reflection in order to influence future behavior / attitudes / perceptions</i>
6	Critical reflection	Issues of justice and emancipation enter deliberations over the value of professional goals and practice. The practitioner makes links between the setting of everyday practice and broader social structure and forces and may contribute to ethical decision making in practice <i>All above and examination of the constraints that social, political, and economic factors have on action as well as questioning values and actions that may hither to have been taken for granted</i>

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822 **Table 3.** Experimental procedure  
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Study Phase	Actions	Data Collection	Period
Baseline	<ol style="list-style-type: none"> <li>1. Participants completed one written reflection per week on a subjectively determined critical incident (cf. Cropley et al., 2007). Reflection submitted to first author each week for scoring and analysis by the research team.</li> <li>2. Participants' completed the performance profile and their clients completed the consultant assessment tool during the last week of the individual baseline phase - both submitted to the research team for collation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Written reflections (1 per week).</li> <li>2. Participant performance profile.</li> <li>3. Client assessment of participant effectiveness.</li> </ol>	Staggered between 3 and 8 weeks.
Intervention	<ol style="list-style-type: none"> <li>1. Individual tutorials (<math>n = 2</math>), 1 per week of the intervention phase.</li> <li>2. Feedback provided on tutorial tasks and written reflections completed during the intervention period.</li> <li>3. Mentoring procedure consisting of formal conversations between participant and first author every two weeks stated at week 1 of the intervention.</li> </ol>	No formal data collection during the intervention.	2 weeks.
Post-intervention	<ol style="list-style-type: none"> <li>1. Participants completed one written reflection per week on a subjectively determined critical incident (cf. Cropley et al., 2007). Reflection submitted to first author each week for scoring and analysis by the research team.</li> <li>2. Ongoing participant mentoring every two weeks post-intervention.</li> <li>3. Participants' completed the performance profile and their clients completed the consultant assessment tool during the last week of the post-intervention phase (week 14) – both submitted to the research team for analysis.</li> </ol>	<ol style="list-style-type: none"> <li>1. Written reflections (1 per week).</li> <li>2. Participant performance profile.</li> <li>3. Client assessment of participant effectiveness.</li> </ol>	Staggered between 4 and 9 weeks.
Social validation	<ol style="list-style-type: none"> <li>1. Social validation interviews conducted individually with participants 48 hours following the completion of the post-intervention phase.</li> </ol>	<ol style="list-style-type: none"> <li>1. Semi-structured, social validation interviews.</li> </ol>	-
Retention	<ol style="list-style-type: none"> <li>1. Two months following completion of the post-intervention phase, participants completed one written reflection per week on a subjectively determined critical incident (cf. Cropley et al., 2007). Reflection submitted to first author each week for scoring and analysis by the research team.</li> </ol>	<ol style="list-style-type: none"> <li>1. Written reflections (1 per week).</li> </ol>	2 weeks (2 months following end of post-intervention phase).

825 **Table 4.** Characteristics of effectiveness assessment: Performance profile (mean category scores) pre- to post-intervention  
 826

Category	Participant																							
	1		2		3		4		5		6		7		8		9		10		11		12	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Personable	6.3	<b>7.7</b>	6.7	<b>7.7</b>	7.3	<b>7.7</b>	7.3	<b>8.0</b>	6.0	<b>6.3</b>	6.3	<b>7.0</b>	7.7	<b>8.0</b>	5.7	<b>6.3</b>	6.7	<b>7.3</b>	6.7	<b>7.0</b>	5.7	<b>6.0</b>	8.0	<b>8.3</b>
Good communicator	5.3	<b>6.3</b>	6.7	<b>7.7</b>	6.7	<b>7.3</b>	7.3	<b>7.7</b>	4.3	<b>5.7</b>	5.3	<b>6.7</b>	8.0	8.0	4.7	<b>5.7</b>	5.0	<b>6.7</b>	5.3	<b>6.3</b>	4.7	<b>5.3</b>	6.7	<b>8.0</b>
Provider of a good practical service	6.2	<b>6.8</b>	6.2	<b>7.2</b>	7.8	<b>8.4</b>	8.0	8.0	6.0	<b>6.4</b>	6.0	<b>7.0</b>	8.6	8.6	5.4	<b>6.4</b>	6.4	<b>7.0</b>	6.6	<b>7.2</b>	5.4	<b>6.4</b>	7.4	<b>7.6</b>
Knowledgeable	6.7	<b>7.3</b>	6.7	<b>7.3</b>	7.3	<b>7.7</b>	8.0	<b>8.3</b>	5.3	<b>6.0</b>	6.0	<b>7.0</b>	8.0	<b>8.3</b>	5.7	<b>6.3</b>	6.3	<b>7.3</b>	5.3	<b>6.7</b>	5.3	<b>6.0</b>	7.0	<b>7.7</b>
Trustworthiness	10.0	10.0	9.0	<b>9.3</b>	8.7	8.7	10.0	10.0	9.0	<b>9.3</b>	10.0	10.0	10.0	10.0	9.0	<b>9.3</b>	9.0	<b>9.3</b>	7.7	<b>8.7</b>	8.0	<b>8.3</b>	7.3	<b>8.3</b>
Exhibits professional skills	5.8	<b>7.0</b>	6.0	<b>7.0</b>	7.2	<b>7.8</b>	7.0	<b>8.2</b>	5.6	<b>6.8</b>	5.6	<b>7.0</b>	7.0	<b>8.2</b>	5.0	<b>6.2</b>	5.4	<b>7.2</b>	5.2	<b>6.8</b>	5.0	<b>6.4</b>	6.2	<b>7.4</b>
Attitude	7.7	7.7	7.0	<b>7.7</b>	8.7	8.7	8.3	<b>9.0</b>	6.7	<b>7.0</b>	7.3	<b>7.7</b>	9.0	9.0	7.3	7.3	8.3	<b>8.7</b>	8.3	8.3	6.3	<b>7.7</b>	8.0	<b>8.7</b>
Mean	6.9	<b>7.5</b>	6.9	<b>7.7</b>	7.7	<b>8.0</b>	8.0	<b>8.5</b>	6.1	<b>6.8</b>	6.7	<b>7.5</b>	8.3	<b>8.6</b>	6.1	<b>6.8</b>	6.7	<b>7.6</b>	6.4	<b>7.3</b>	5.8	<b>6.6</b>	7.2	<b>8.0</b>
SD	1.6	1.2	1	1	1	1	1	0.8	1	1	1.6	1.2	1	0.7	2	1	1	1	1	1	1	1	1	0

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 829 Note: **Bold** scores represent criteria that improved during the post-intervention assessment  
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831 **Table 5.** Assessment of consultant effectiveness (client scores) pre- to post-intervention  
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Criteria	Participant																								
	1		2		3		4		5		6		7		8		9		10		11		12		
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
Practitioner personal characteristics	8	8	6	<b>8</b>	10	10	8	8	8	8	8	<b>9</b>	7	<b>8</b>	6	<b>7</b>	8	8	8	8	7	7	8	8	
Practitioner attitude	7	<b>8</b>	6	<b>8</b>	9	<b>10</b>	6	<b>10</b>	8	8	7	<b>10</b>	8	<b>10</b>	7	<b>8</b>	8	8	9	<b>10</b>	7	<b>8</b>	9	<b>10</b>	
Trustworthiness of practitioner	6	<b>9</b>	9	9	10	10	10	10	8	<b>10</b>	9	9	10	10	10	10	9	9	10	10	7	<b>9</b>	10	10	
Development of professional consulting relationship	6	<b>8</b>	5	<b>8</b>	10	10	9	9	8	8	7	<b>9</b>	9	<b>10</b>	6	<b>8</b>	6	<b>8</b>	8	8	7	<b>9</b>	8	8	
Good communicator	4	<b>7</b>	5	<b>7</b>	10	10	7	<b>10</b>	7	7	8	8	10	10	6	<b>7</b>	4	<b>7</b>	9	9	7	<b>9</b>	9	<b>10</b>	
Practitioner knowledge: Sport	7	<b>8</b>	6	<b>8</b>	7	<b>9</b>	10	10	4	<b>6</b>	6	<b>8</b>	10	10	5	<b>6</b>	5	<b>7</b>	10	10	10	10	10	10	
Practitioner knowledge: Psychology	8	8	7	<b>8</b>	9	<b>10</b>	7	<b>8</b>	9	9	9	9	9	<b>10</b>	7	<b>9</b>	8	8	9	9	7	<b>9</b>	7	<b>9</b>	
Adoption of a client-centred approach	8	8	5	<b>8</b>	9	<b>10</b>	5	<b>8</b>	8	<b>9</b>	9	9	8	<b>10</b>	7	<b>9</b>	9	9	9	9	<b>10</b>	5	<b>7</b>	8	8
Ability to meet client needs	6	<b>7</b>	5	<b>7</b>	7	<b>10</b>	8	<b>9</b>	6	<b>8</b>	7	<b>8</b>	9	9	7	<b>8</b>	7	<b>9</b>	9	<b>10</b>	5	<b>7</b>	9	9	
Structure of the support	6	<b>8</b>	7	<b>9</b>	9	9	10	10	6	<b>8</b>	6	<b>8</b>	10	10	7	<b>8</b>	7	<b>9</b>	6	<b>9</b>	8	8	10	10	
Overall effectiveness*	2	<b>3</b>	3	<b>4</b>	4	<b>5</b>	3	<b>4</b>	2	<b>3</b>	2	<b>4</b>	4	4	2	<b>3</b>	3	<b>5</b>	4	4	2	<b>3</b>	4	4	
Mean**	6.6	<b>7.9</b>	6.1	<b>8</b>	9	<b>9.8</b>	8	<b>9.2</b>	7.2	<b>8.1</b>	7.6	<b>8.7</b>	9	<b>9.7</b>	6.8	<b>8</b>	7.1	<b>8.2</b>	8.7	<b>9.3</b>	7	<b>8.3</b>	8.8	<b>9.2</b>	
SD	1.3	0.6	1.3	0.7	1.2	0.4	1.8	0.9	1.5	1.1	1.2	0.7	1.1	0.7	1.3	1.2	1.7	0.8	1.2	0.8	1.4	1.1	1.0	0.9	

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 834  
 835 Note: **Bold** scores represent criteria that improved during the post-intervention assessment

836 \*Scores for overall effectiveness ranked on a scale of -5 (hindered) to +5 (helped a lot)

837 \*\*Mean scores exclude the *overall effectiveness* item due to the different scales of measurement

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839 **Figure 1.** Participants' levels of reflection: Baseline, post-intervention and retention phases

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841 P = Participant number

842 A = Baseline; B = Intervention period; C = Post-intervention; D = Retention

843 ---- = Trend lines

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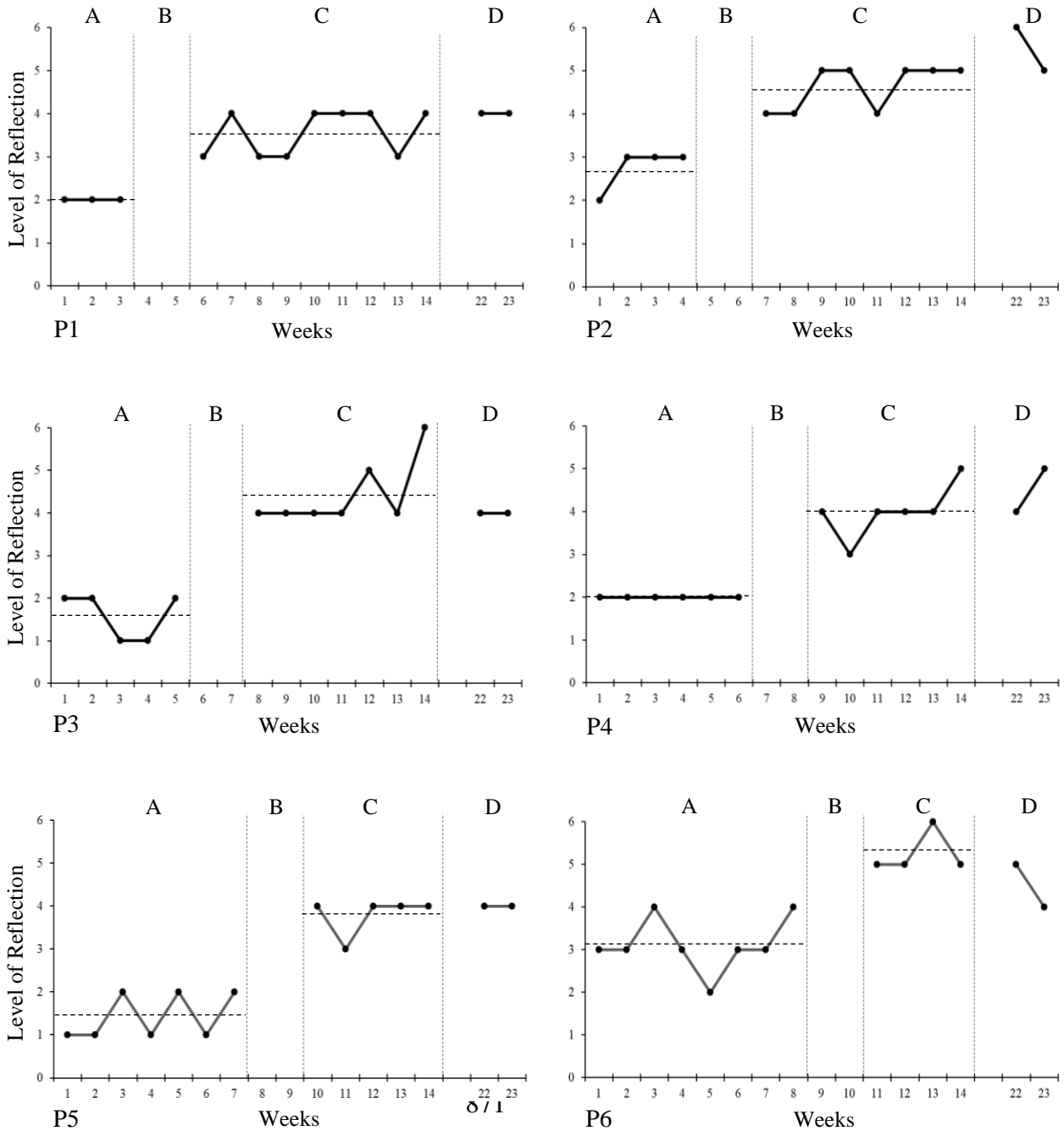
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880 **Figure 1 cont.** Participants' levels of reflection: Baseline, post-intervention and retention phases

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882 P = Participant number

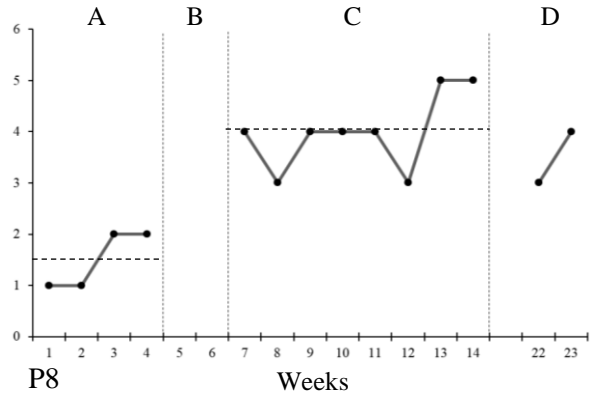
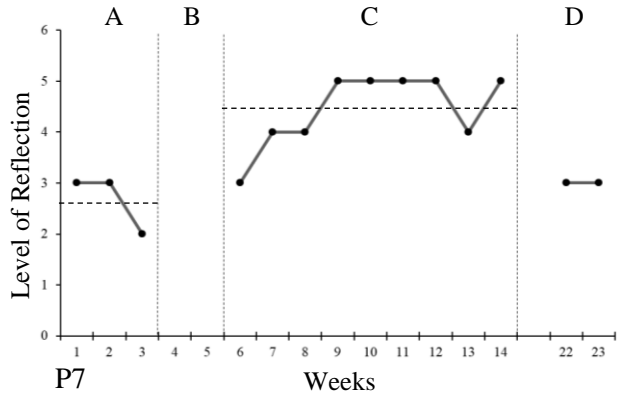
883 A = Baseline; B = Intervention period; C = Post-intervention; D = Retention

884 ---- = Trend lines

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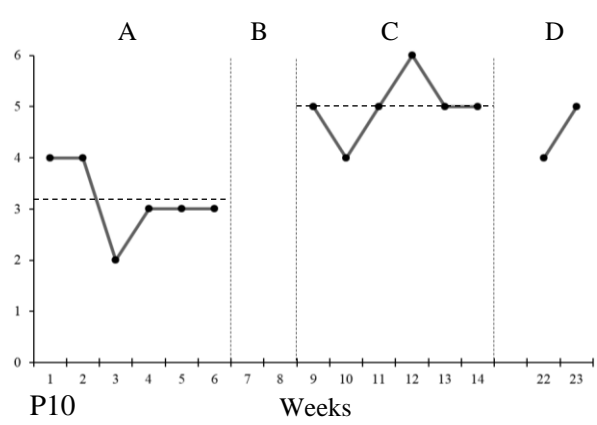
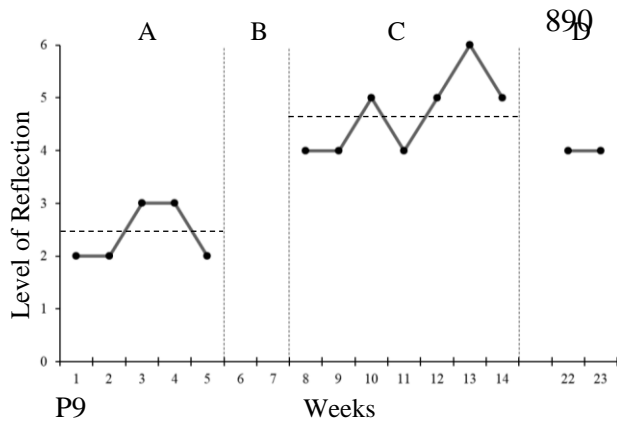
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