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The future of continuing education and lifelong learning in sport psychology professionals:

A Delphi study

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**Abstract**

One of the fundamental competencies for psychologists is to practice according to the ethical standards and principles of their profession. Two ways of achieving these standards include engaging in continuing education (CE) and lifelong learning (LL). Sport psychology professionals (SPPs) have frequently noted the importance of engaging in CE and LL to improving one's professional practice, yet no research currently exists specifically examining these concepts in the sport psychology literature. A panel of 16 expert SPPs were invited to participate in a 3-phase Delphi study. This multinational panel of experts was selected based on their involvement in committees charged by sport psychology organizations with developing and implementing CE for their membership. The Delphi approach was used to better understand SPPs' views on: the optimal delivery, assessment, and impact of CE and LL, as well as the SPP's beliefs regarding the "half-life" of knowledge within the sport psychology field. The SPPs in the Delphi mainly worked in academic (65%) or applied (37.5%) settings with an average professional experience of 14 years. While the experts considered CE and LL to be important, they reported limited of engagement and investment in either activity. Moreover, the SPPs predicted an increase in e-learning methods of delivery and anticipated a growing impact of CE and LL in supporting professionals. Finally, the participants predicted a reduction in the "half-life" of sport, but not performance, psychology knowledge over the next 10 years. Such predictions highlight the salience of professional organizations promoting engagement with CE and LL.

Keywords: Professional Training, Lifelong Learning, Professional Development, Effective practice, Delphi methodology

**46 Public Significance Statement**

47           This study advances the knowledge related to the value of continuing education for the  
48 effective care provision by sport psychology professionals. Specifically, a panel of 16 expert sport  
49 psychology professionals worked to consensually agree on a definition of continuing education and  
50 lifelong learning applicable to the sport psychology field and identify effective ways to plan, deliver  
51 and evaluate continuing education in the field.

52 The future of continuing education and lifelong learning in sport psychology professionals:  
53 A Delphi study

54 Sport psychology professionals (SPP) are in growing demand (cf. Weir, 2018) and, as  
55 scholars seek to meet this demand, they have sought to develop a clearer understanding of the  
56 fundamental characteristics (Lubker, Visek, Geer, & Watson, 2008; Sharp & Hodge, 2011) and  
57 competencies (Fletcher & Maher, 2013; 2014) that define their work (cf. Wagstaff & Hays, 2019).  
58 To professionalize psychological practice and clarify necessary knowledge and skills, a growing  
59 emphasis has been placed by scholars on competency-based models of practice, training, and  
60 credentialing (cf. Rubin et al., 2007). For example, such foci have led to the development of the  
61 cube model of competency (cf. Rodolfa, Bent, Eisman, Nelson, Rehm, & Ritchie, 2005), which has  
62 also recently been applied to practice of sport psychology (SP; Fletcher & Maher, 2013).

63 While competence refers to an individual professional's suitability for the profession (Rubin  
64 et al., 2007), "it is not a static end point that one achieves, nor should it be viewed in a dichotomous  
65 manner" (Fletcher & Maher, 2013, p. 267). In fact, professionals should not be described as  
66 competent or incompetent, but on a continuum, ranging from low to high competence (Barnett,  
67 Doll, Younggren, & Rubin, 2007). Further, due to the developmental, incremental, and context-  
68 dependent nature of competencies (Rubin et al., 2007), it is important for professionals to constantly  
69 renew their knowledge. Dubin (1972) argued that one major challenge faced by many professions is  
70 to continue developing and maintaining competence while simultaneously increasing specialization  
71 and profusion of knowledge. Further, Dubin noted one indicator of this challenge is observable in  
72 the constant shrinking of the "half-life" of professional knowledge. The half-life of professional  
73 knowledge can be defined as the time it takes before half of the knowledge one gains during  
74 training is lost, and one becomes half as knowledgeable than when they completed their training  
75 (Neimeyer, Raylor, & Rozensky, 2012b). Neimeyer and colleagues have argued that the half-life of  
76 professional psychology knowledge is likely to shrink substantially in the near future (Neimeyer et  
77 al., 2012b; Neimeyer, Raylor, Rozensky, & Cox, 2014). Specifically, the half-life of the SP  
78 proficiency was estimated by non-sport psychology continuing education experts to be 8.15 years

79 over the next 10 years (Neimeyer et al., 2012b). Neimeyer and colleagues (2012b) anticipated a  
80 drop in the half-life of the SP proficiency (-9%) making the SP proficiency the most stable among  
81 the APA proficiencies. If compared to other APA specialties, SP has the same deterioration as  
82 family psychology, which appears to be the specialty with the fourth most stable knowledge. Sport  
83 psychology knowledge stability appears to be more stable than ‘professional psychology’  
84 knowledge in general, which Neimeyer and colleagues (2014) anticipated to experience a  
85 degradation of 17.8% over the subsequent 10 years.

86 Related to the competency development of psychology professionals is the process of  
87 continued professional development (CPD), and which is widely accepted as one of the main pillars  
88 to maintain professional effectiveness and excellence (Neimeyer, Taylor, & Cox, 2012a; Wylleman,  
89 Harwood, Elbe, de Caluwé, 2009). CPD can be further divided into two components that are worthy  
90 of a closer scrutiny: continuing education (CE) and lifelong learning (LL). The American  
91 Psychological Association (2015) defined CE as:

92 an ongoing process consisting of formal learning activities that (1) are relevant to  
93 psychological practice, education and science; (2) enable psychologists to keep pace with  
94 the most current scientific evidence regarding assessment, intervention, and education as  
95 well as important legal, statutory, or regulatory issues; and (3) allow psychologists to  
96 maintain, develop, and increase competencies in order to improve services to the public and  
97 enhance contributions to the profession (p. 2)

98 According to Neimeyer, Taylor, Wear, & Linder-Crow (2012c), CE consists of a wide  
99 assortment of professional activities, roles, and responsibilities, aimed at providing opportunities for  
100 practitioners to learn and to stay up-to-date with changes in their fields. As a possible partial  
101 solution to what Ross (1974) described as the “danger of professional obsolescence” (p. 122), CE  
102 has an important role in maintaining optimal professional functioning and acts as a mechanism to  
103 ensuring competent and ethical practice (Neimeyer, Taylor, & Wear, 2009; 2010b). Some CE  
104 activities previously reported by psychology professionals include self-directed learning (e.g.,  
105 reading journal articles), conference attendance, teaching/taking classes, participating in workshops,

106 peer consultation, and scholarly work, or any combinations of these. Yet, this work has almost  
107 exclusively been conducted with clinical psychology professionals and there is limited clarity  
108 regarding the CE activities and their impact across other disciplines of psychological practice  
109 (Neimeyer et al., 2012c).

110 While the value of CE has been demonstrated in general psychology (e.g., Neimeyer,  
111 Taylor, & Philip, 2010a; Neimeyer, Taylor, & Wear, 2011), some scholars have raised concerns  
112 regarding the mandatory participation in these programs (Adams & Sharkin, 2012; Neimeyer et al.,  
113 2009; VandeCreek, Knapp, & Brace, 1990). That is, scholars have noted declining engagement with  
114 CE by uninterested attendees motivated by mandatory attendance requirements rather than a  
115 genuine interest in learning (Neimeyer et al., 2009). Additionally, scholars have argued that formal  
116 CE credits are not the only (or primary) way to guarantee professional development, which instead  
117 can unfold from other learning (i.e., informal and incidental) and professional (e.g., peer  
118 consultation) activities as well as from personal maturation (Neimeyer et al., 2009).

119 Taylor, Neimeyer, Zemansky, and Rothke (2012) highlighted the role of CE as the link  
120 between lifelong learning (LL) and professional competence, with all three factors contributing to  
121 the development and maintenance of competence among professionals. LL can be defined as, "a set  
122 of self-initiated activities (behavioral aspect), and information seeking skills (capabilities) that are  
123 activated in individuals with a sustained motivation to learn and the ability to recognize their own  
124 learning needs (cognition)" (Hojat, Veloski, Nasca, Erdmann, & Gonnella, 2006, p. 931). While  
125 engaging in CE and LL is important to prevent the erosion of competencies (Fletcher & Maher,  
126 2013), Wylleman et al. (2009) noted that, despite great attention being placed on the early stages of  
127 SP training, only limited attention has been devoted to the LL of experienced SPPs. Thus, there  
128 remains a gap in current knowledge regarding how experienced SPPs engage in CE and LL. It  
129 follows that research is needed to understand how SPPs conceptualize and operationalize CE and  
130 LL. Such research will enable scholars to better comprehend how professionals might continue to  
131 develop their skills and update and refine their professional knowledge, and in doing so, maintain  
132 and engagement with a sustainable, ethical and effective professional service. Hence, in this study

133 we aimed to develop a consensual definition of CE and LL, and to understand of how SPPs  
134 perceived the future of the CE's (1) methods of delivery, (2) assessment of outcome, (3) anticipated  
135 impact, and (4) specialization of knowledge, based on the current status quo of the discipline.

## 136 **Method**

### 137 **Design**

138 Kaynak and Macauley (1984) described the Delphi method as, "a unique method of eliciting  
139 and refining group judgement based on the rationale that a group of experts is better than one expert  
140 when exact knowledge is not available" (p. 90). This is a systematic and rigorous approach to  
141 gathering opinion and generating consensus on issues that require the input of geographically-  
142 dispersed experts. Four are the key elements characterizing the Delphi method: (1) panelists'  
143 anonymity, which allows the free expression of the panelists' opinions without incurring in group  
144 thinking; (2) feedback, which provides the opportunity to clarify and/or change panelists'  
145 perspectives, (3) iteration, which allows the refinements of the panelists' views based on the  
146 feedback generated by all the panelists' answers at each round; and finally, (4) statistical analysis of  
147 responses, which allows for a quantitative analysis and interpretation of data (Rowe & Wright,  
148 1999). The Delphi method was chosen for this study because it provided the opportunity to invite to  
149 participate professionals, scholars and practitioners from around the world with expertise in  
150 continuing education and experience of planning, delivery, assessment of continuing education.

151 By gathering data using a series of iterative questionnaire stages, the Delphi method aims to  
152 gain consensus among experts (Keeney, Hasson, & McKenna, 2011). Each round of questionnaire  
153 development is built on the results of the previous round, that are recorded, analyzed, and returned  
154 to the experts for reevaluation (Keeney et al., 2011). Over multiple iterations, the experts are asked  
155 to consider the composite responses of all the panelists, and reflect on their own responses. Using  
156 the Delphi method has some important advantages including inter alia expert anonymity, controlled  
157 feedback, and the opportunity to conduct a variety of statistical analyses to assist interpreting the  
158 data (Keeney et al., 2011). These characteristics support the research in limiting some of the  
159 common shortcomings of conventional pooling techniques, such as dominant participants, noise,

160 and conformity (Dalkey, 1972). Generally, the Delphi methods involve at least a two-step process  
161 beginning with identification/elaboration of a set of concepts followed by classification/taxonomy  
162 development (Okoli & Pawlowski, 2004). A key tenet of the Delphi method is the proposition that  
163 group opinion is more robust than individual opinion (McKenna, 1994), and that group consensus is  
164 a useful technique for soliciting the opinions of experts in a given domain (Schmidt, 1997).

### 165 **The Expert Panel Identification**

166 In this study, the experts were selected following an initial review of literature and a  
167 theoretical sampling process aimed at identifying professionals whose area of work align with the  
168 scope of the study. In line with guidelines for the Delphi method (Okoli & Pawlowski, 2004), we  
169 established two main inclusion criteria for the expert panel. Those criteria were (1) SPPs who  
170 currently or formerly were member of CE committees in SP organizations, and (2) whose profiles  
171 could cover the heterogeneity of the SP activities. Introductory emails containing an invitation to  
172 participate were sent to 40 SPPs. Thirteen professionals immediately declined the invitation because  
173 they were too busy to participate, other 11 did not complete the later rounds of the process. This  
174 drop-out did not negatively impact the representation of a diverse and inclusive sample regarding  
175 gender, race, professional role, average experience, or the geographical dispersion of the panelists.  
176 The final panel included 16 SPPs with an average of 14.13 (SD = 7.36) years of professional  
177 experience, situated in the United States (5; 31.3%) and the United Kingdom (11; 68.7%). These  
178 professionals divided their time between academic (M = 68.38; SD = 30.6) and applied (M = 31.63;  
179 SD = 30.6) work (see Table 1).

180 Of the 40 experts who were initially invited to participate, 27 individuals agreed and  
181 completed the first round (response rate = 67.5%). All of these professionals also received the  
182 invitation to participate in second round, with 19 of them completing the second round (2<sup>nd</sup> round  
183 response rate = 70.4%). Of these 19 professionals, 3 dropped out from the third and last round of  
184 data collection, further reducing the sample size to 16 (3<sup>rd</sup> response rate = 84.2%). This attrition rate  
185 of 60% is comparable with other Delphi studies and the final sample for this study was adequate for  
186 effectively answering the research question. To elaborate, Martin (1983) argued that the optimal size



187 of the Delphi panel varies depending on the purpose of the study and on the heterogeneity of the  
188 population. Generally, Delphi scholars (e.g., Dalkey, Brown, & Cochran, 1970; Delbecq, Van de  
189 Ven, & Gustafson, 1975; Ludwig, 1997) have proposed that a panel of 15 to 20 experts could be  
190 considered optimal for this methodology to be effective.

### 191 **Procedure**

192 In line with Okoli and Pawlowski's (2004) guidelines, the experts who agreed to participate  
193 were sent an email with instructions to follow a link to the first-round survey hosted by Qualtrics  
194 (Qualtrics, Provo, UT). Two follow-up emails were sent to those experts who agreed to participate,  
195 but who did not complete the first round of the study. Figure 1 provides a procedural flow chart.

196 The purpose of the first round of the Delphi was twofold: (1) to develop a commonly agreed  
197 upon definition of CE and LL, and (2) to develop a conceptual understanding of the SPPs' beliefs  
198 regarding CE, specifically focused on the methods of delivery, assessment of outcome, anticipated  
199 impact, and expansion and specialization of knowledge. With the aim of developing a SP-specific  
200 definition of CE and LL, the panelists were first invited to answer open-ended questions (e.g.,  
201 "Based on your experience as a SEPP professional, how would you define the concept of "lifelong  
202 learning"?"). Then, they were asked to answer open ended questions (e.g., "Based on your  
203 experience as an SEPP professional, what would you describe to be the main and most effective  
204 way to assess the outcome of continuing education?") aimed to understand the profession specific  
205 knowledge in terms of (1) the methods of CE delivery, (2) the assessment of CE outcome, (3) the  
206 anticipated impact of CE, and (4) the expansion and specialization of knowledge within the field  
207 (cf. Neimeyer et al., 2012c). The panelists were also asked to rank the importance of engaging in  
208 CE to sustain LL using a 5-point Likert scale (1 = "not important at all", 5 = "very important").

209 In the second round of the Delphi, the experts were presented with the list of items. The  
210 content of these items was derived from the content analysis completed on the open-ended  
211 responses from the first round. Aiming to explore how these panelists predict how CE in SP might  
212 be, they were asked to respond according to their prediction, and not their preference, on how the  
213 field would change in the following 10 years. Following the work of Neimeyer and colleagues,

214 ratings were made using a 5-point Likert scale with different anchors according to the specific  
215 question (Neimeyer et al., 2009; Neimeyer et al., 2012c; Taylor et al., 2012). Specifically, when  
216 asked about the delivery format, assessment method, and focus of knowledge, the anchors used  
217 were “decrease” (1) or “increase” (5) and when asked about the impact of CE, the anchors were  
218 “very little” (1) to “great” (5) impact. Finally, the panelists were asked to indicate what they  
219 perceived to be the half-life of professional knowledge in SEPP now and to predict this over the  
220 next 10 years. Participants were provided with the opportunity to provide open-ended feedback  
221 about any items in the Delphi round.

222 For this study, we adopted Keeney et al.’s (2011) threshold for determining consensus. That  
223 is, we deemed consensus to have been reached when at least 75% of the experts were within a  
224 standard deviation of the acceptability threshold. To elaborate, the second round included the  
225 review of the additional feedback and the identification of those items that did not reach consensus.  
226 Finally, following the removal of those statements that did reach consensus, the third round was  
227 launched, sending an individualized survey to each expert for final feedback and commentary. After  
228 the third-round consensus was reached. This process unfolded between December 2017 and August  
229 2018.

## 230 **Results**

231 In this three-round Delphi study the authors aimed to develop a consensual definition of CE  
232 and LL in SP and learn from SPPs about the planning, delivery, and assessment of CE. The data are  
233 presented by round.

234 **Round 1.** During the first round of the Delphi method, the panelists were invited to provide  
235 their personal definitions of CE and LL as well as narrative responses to the four elements of CE: (1)  
236 delivery, (2) assessment, (3) impact, and (4) content. A preliminary content analysis of the responses  
237 was conducted to identify possible themes (see Hsieh & Shannon, 2005; Miles, Huberman, &  
238 Saldana, 2014). This content analysis was completed in two parts by the first two authors. Initially,  
239 these authors independently familiarized themselves with the raw data and assigned preliminary  
240 descriptive codes to these data. They then reviewed their independently developed codes and

241 collaboratively sought patterns, discussed any differences in interpretation to develop themes and a  
242 working definition of CE and LL. A similar process was followed to analyze answers provided by  
243 the panelists to specific questions aimed to learn about their views on the CE methods of delivery,  
244 assessment of outcomes, anticipated impact, and expansion and specialization of knowledge. CE was  
245 conceptualized as “an ongoing engagement in formally organized and recognized professional  
246 opportunities for the development of new knowledge, understanding, and the application of best  
247 practice to support a meaningful, ethical, and effective career, as well as to improve services to the  
248 public and profession” (see Table 2). The same process also led to the development of the definition  
249 of LL, which was conceptualized as “one's desire to explore and engage in ongoing information-  
250 seeking and self-reflective activities to satisfy one's personal curiosity and self-development  
251 throughout one's career, but which are not necessarily a professional obligation" (see Table 3).  
252 Finally, using a 5-point Likert scale (1 = not at all; 5 = extremely), the panelists were also asked to  
253 rank the importance of the role that CE plays in fostering LL ( $M = 4$ ;  $SD = 0.61$ ) and to describe the  
254 percentage of their time they dedicated to planning ( $M = 23.06$ ;  $SD = 16.7$ ), delivering ( $M = 35.69$ ;  
255  $SD = 23.18$ ), and attending ( $M = 41.25$ ;  $SD = 31.59$ ) CE programs (see Table 2 and 3).

256 **Round 2.** Following content analysis of the qualitative data from Round 1, the panelists  
257 were first asked to provide feedback on the definitions (see Table 2 and 3). Specifically, they were  
258 asked to rank, on a 5-point Likert scale (1 = not at all; 5 = extremely), how exhaustive and  
259 representative these definitions were, and how important it is for SPPs to adhere to CE and LL  
260 according to these definitions. The experts perceived these definitions as exhaustive ( $M_{CE} = 3.89$ ;  
261  $SD_{CE} = 1.2$ ;  $M_{LL} = 3.79$ ;  $SD_{LL} = 1.08$ ) and applicable ( $M_{CE} = 4.47$ ;  $SD_{CE} = 0.51$ ;  $M_{LL} = 4$ ;  $SD_{LL} =$   
262  $0.75$ ). Similar results, although slightly higher, were found also in terms of these panelists' opinion  
263 of the importance for SPPs to adhere to them ( $M_{CE} = 4.21$ ;  $SD_{CE} = 0.63$ ;  $M_{LL} = 3.95$ ;  $SD_{LL} = 1.03$ )  
264 and to foster professional culture based on them ( $M_{CE} = 4.42$ ;  $SD_{CE} = 0.61$ ;  $M_{LL} = 4.32$ ;  $SD_{LL} =$   
265  $0.75$ ). When invited to provide any further comments or feedback about these definitions the  
266 panelists did not add any content-based feedback, but did provide positive remarks about the quality  
267 of the definitions.

268 The panelists were also asked to rank a variety of items in response to 4 main stems focused  
269 on CE and specifically on its four aspects of delivery, assessment, impact, and expansion and  
270 specialization of knowledge. These items were based on a combination of the experts' independent  
271 views and feedback on research-informed categories presented to them in Round 1 (see Table 4 and  
272 5). In line with the procedure undertaken by Keeney et al. (2011), we analyzed the results of the  
273 expert ranking calculating mean and standard deviation of the participants' ratings for each of the  
274 items. Panelists' ratings within  $\pm 1$  standard deviation of the whole panel mean were considered  
275 within the acceptability threshold and deemed to have reached consensus and therefore retained.  
276 Those ratings outside of the  $\pm 1$  standard deviation of the mean were, instead, considered outside  
277 the acceptability threshold. The panelists failed to reach the 75% acceptability threshold for 20 of  
278 the 32 statements (Table 6). Following these analyses 20 of the original items did not reach  
279 consensus and were included in third round in an attempt to stimulate further reflection and reach  
280 consensus about the items as appropriate or inappropriate (cf. Keeney et al., 2011).

281 **Round 3.** During the final round, panelists were presented with the 20 statements that did  
282 not reach the 75% consensus threshold in Round 2. In line with the recommendations of Keeney et  
283 al. (2011), for each of these items we indicated the group mean and standard deviation. The  
284 panelists were then asked to read the comments and ratings of other panelists, to reflect on their  
285 own judgements, and then provide ratings of the remaining items. This round gave the experts an  
286 opportunity to further clarify the information and their judgments about the importance of each  
287 individual item. The analysis of the data showed that the experts reached consensus on twelve of  
288 these items, while the remaining eight did not reach consensus.

289 Finally, based on the consensually developed definitions, they were also asked to rate, on a  
290 scale 1-100, their involvement (e.g., dedicated time), interest (e.g., commitment to), and investment  
291 (e.g., financial) in CE and LL (Table 7). Interestingly, when asked about CE these panelists  
292 expressed very high interest ( $M = 83.5$ ;  $SD = 13.02$ ), but very much lower involvement ( $M = 55.94$ ;  
293  $SD = 23.47$ ) and investment ( $M = 44.56$ ;  $SD = 25.98$ ). Similar differences, although with lower

294 general scores, also characterized the answers focused on LL with higher interest ( $M = 65.13$ ;  $SD =$   
295  $25.11$ ) and lower involvement ( $M = 47.25$ ;  $SD = 25.98$ ) and investment ( $M = 40.44$ ;  $SD = 26.75$ ).

296 Finally, the experts were asked their view of the “half-life” of knowledge accrual, or length  
297 of time to learn the required knowledge to practice in sport, exercise, and performance psychology.  
298 Participants gave ratings for the current half-life and their prediction of this 10 years in the future.  
299 Interestingly, the experts predicted a slight decrease of the half-life of knowledge accrual in sport  
300 and exercise between now ( $M_s = 8.65$ ,  $SD_s = 4.34$ ;  $M_e = 7.74$ ,  $SD_e = 5.02$ ) and the next 10 years ( $M_s$   
301  $= 8.35$ ,  $SD_s = 4.96$ ;  $M_e = 7.55$ ,  $SD_e = 5.43$ ). This reduction of knowledge was not observed for  
302 performance psychology, which was predicted to have a current half-life of 7.2 years ( $SD_p = 3.68$ ),  
303 which would increase over the next 10 years ( $M_p = 7.7$ ;  $SD_p = 4.7$ ).

304

### Discussion

305 In this study, we aimed to extend the knowledge regarding how expert SPPs conceptualize  
306 and operationalize CE and LL. As such, a consensually agreed definition of CE and LL was  
307 developed based on the panelists’ expertise in CE. Moreover, the Delphi process has enabled us to  
308 identify an important professional consensus regarding best practice for CE and LL methods of  
309 delivery, assessment of outcomes, anticipated impact, and, specialization of knowledge.

310 The panel of SPPs in this study had expertise in developing CE programs in SP and agreed  
311 on a common definition of CE and LL. Further, the Delphi method led to a characterization of CE  
312 as the structured and formal engagement in a process aimed “to support a meaningful, ethical, and  
313 effective career, as well as to improve services to the public and profession”. While, the  
314 engagement in CE has been advocated by scholars (e.g., Hutter, van der Zande, Rosier, &  
315 Wylleman, 2018; Wylleman et al., 2009), the results of this Delphi process can be interpreted as  
316 indicating that SPPs should avoid engaging in CE due to an obligation to meet the expectations of  
317 professional bodies, and might instead seek to frequently engage in LL. To elaborate, the experts in  
318 this study reached a consensus definition of LL as an individual’s desire to “explore and engage in  
319 ongoing information-seeking and self-reflective activities to satisfy one's personal curiosity and  
320 self-development”. This desire could be fostered by educational programs promoting attitudinal and

321 behavioral change allied with LL (Wise et al., 2010). The potential value of such programs is  
322 evident from recent studies in which experienced SPPs have highlighted how their participation in  
323 CE programs is a fundamental component of their LL (Quartiroli, Etzel, Knight, & Zakrajsek,  
324 2019), and in which engaging in CE and LL have been noted as strategies advanced SPPs employ to  
325 foster their SP professional quality of life (Quartiroli, Knight, Etzel, & Zakrajsek, 2019).

326 The panel of experts in this study included an engagement in self-reflective activities as  
327 important aspect of their LL. Such findings align with the extant body of work on reflective practice  
328 in SP, which has been illustrated as a means to fostering and sustaining positive and effective career  
329 development (Cropley, Baldock, Neil, Mellalieu, Wagstaff, & Wadey, 2016; Haberl & Peterson,  
330 2010). Given these observations, it is salient for SPPs to be cognizant of both CE and LL aspects of  
331 their professional (and personal) development. Lastly, while professionals' engagement in CE is  
332 often a requirement for their participation in professional organizations and for retaining professional  
333 qualifications and credentials, an individual's LL reflects a personal choice which is rarely reported  
334 or captured by professional organizations. Hence, LL activities present an autonomous personal and  
335 professional opportunity which professionals must prioritize and resource to maximize their benefit.

### 336 **Methods of Delivery**

337 In agreement with previous research published in general psychology (see Neimeyer et al.,  
338 2012c), the experts in this study agreed that there would be an increased use of e-learning methods of  
339 delivery of CE (i.e., internet-based programs), and a movement toward mainly video-based  
340 presentations. On the other hand, they perceived a decreased use of in-person presentation-based  
341 programs, although the use of group activities and hands-on workshops to deliver CE content was not  
342 anticipated to change in the future. E-learning methods have the advantage of being able to reach a  
343 great number of practitioners, while being at a fairly low cost (Wise et al., 2010), and it is perhaps not  
344 surprising that SP organizations, such as the Association for Applied Sport Psychology, the  
345 International Society of Sport Psychology and the APA Society for Sport. Exercise and Performance  
346 Psychology are overtly investing in this method of delivery. Yet, possible challenges might unfold

347 when trying to develop and distribute these modules to areas of the world where technology or  
348 internet connection might not be as advanced.

### 349 **Assessment of CE**

350 Focusing on the assessment of CE programs, the experts were asked to predict the future of  
351 the methods of assessment as well as the focus of assessment for these programs. The experts in the  
352 panel anticipated an increase in the assessment of the general learning as well as the specific  
353 learning outcomes of CE programs. Moreover, they predicted an increase in the use of assessment  
354 modalities that tested the application of CE program material and a small increase in the assessment  
355 of skills, knowledge, and competencies developed during these programs. Interestingly, the experts  
356 also predicted an increase in the need for assessments of participants' satisfaction with CE  
357 programs. In terms of how these experts perceived CE's outcomes to be assessed, they predicted the  
358 greatest increase in reflection- and case-based assessment methods. The view proffered by the  
359 experts about the assessment of CE programs aligns with the growing focus on evidence-and  
360 competence-based practice in other domains of psychological practice (see Kaslow, Grus,  
361 Campbell, Fouad, Hatcher, & Rodolfa, 2009; Neimeyer et al., 2012c). It follows that efforts to  
362 evaluate the practice outcomes of CE programs could lead to the development of more evidence-  
363 based CE, and in turn, supporting a greater engagement with these programs (Neimeyer et al.,  
364 2009).

### 365 **The anticipated impact of CE**

366 Concerning the anticipated impact of CE programs in SP, the panel predicted a growth in  
367 attention dedicated by professionals to the outcomes of these programs in the future, showing a  
368 positive view of how these programs may impact the profession over the next 10 years.  
369 Specifically, the participants predicted these programs to better support SPPs in keeping up-to-date  
370 with their professional knowledge and to translate this knowledge into practice. These experts also  
371 predicted that these programs will have increasingly more impact on maintaining and enhancing  
372 SPP's professional competence, providing a stronger protection of the public. While these  
373 predictions provide an important message for SP organizations in terms of planning and formalizing

374 engagement in CE programs, it is important to note that formal CE programs are not the only source  
375 for professional development (Neimeyer et al., 2009). Indeed, there are various other sources of  
376 professional development including informal and incidental forms of professional development  
377 (Goodyear & Lichtnberg, 2008; Tod, Hutter, & Eubank, 2017). To elaborate, while informal CE  
378 may be engaging in by reading journals, attending conference, peer consulting (Goodyear &  
379 Lichtnberg, 2008), incidental forms encompass those situations where learning is secondary to the  
380 goal of the activity itself. For example, Skovholt and Starkey (2010), noted that psychology practice  
381 itself can be a source of professional development for practitioners. These forms of informal and  
382 incidental professional development might find their foundation in an individual's attitude toward  
383 LL. In fact, it appears that positive attitude towards to LL may predict a greater engagement in  
384 many of these activities (Taylor et al., 2012). For this reason, it may be very important for SPPs to  
385 cultivate their own personal positive attitudes towards LL as well as for graduate programs and  
386 professional organizations to support their students and members in these efforts. In addition, trying  
387 to describe the journey of these professionals, Skovholt and Starkey (2010) identified how  
388 professional development is not only the results of formal and informal sources of learning, but  
389 instead it is also supported by a continuing personal maturation.

### 390 **Knowledge expansion and specialization**

391 When asked about the future of the profession in terms of its focus, the experts predicted an  
392 increased focused on contextual (i.e., exercise, sport, performance), population (i.e., exercisers,  
393 amateur, professional, and elite athletes, artists, military, coaches, etc.) and content (i.e., clinical,  
394 educational) specializations. This growing specialization seems to align with trends previously  
395 identified in the general psychology literature (cf. Kaslow et al., 2009). Moreover, these results  
396 could be explained in relation to the panelists' assessment of the shrinking "half-life" of knowledge,  
397 specifically of the sport and exercise psychology specialization, and leading to a stronger need for  
398 updated and specialized knowledge. Yet, this panel of experts did not predict a similar trend for  
399 performance psychology specialization, whose half-life was instead predicted to increase. This  
400 difference in prediction might require further exploration given the growing numbers of



401 professionals working in non-athletic performance contexts. Interestingly, this panel of experts did  
402 not predict a similar trend for performance psychology specialization, whose half-life was instead  
403 predicted to increase. This difference in prediction might require further exploration given the  
404 growing numbers of professionals working in non-athletic performance contexts.

405 *With this study, we furthered the current existing literature focused on continue education*  
406 *and lifelong learning, being one of the very first studies focusing specifically on sport psychology*  
407 *professionals. However, while we paid particular attention to develop a possible internationally*  
408 *applicable definition of CE and LL, due to the fact that 24 of the invited panelist dropped from this*  
409 *study limited our sample of experts with professionals from the USA and the UK. In the future,*  
410 *scholars may need to expand this exploration to experts from other countries and continent. This*  
411 *process may lead to either test the validity of these results to our cultural contexts or to culturally*  
412 *grounded alternative definitions of CE and LL.*

#### 413 **Conclusion**

414 In conclusion, this Delphi study has provided valuable expert consensus on defining what  
415 CE and LL mean in the SP field and profession. Further, this study presents a first exploration of  
416 CE in the SP field, and which showcases fast and substantially changing delivery (e.g., methods,  
417 assessment, content, impact) and significance, as more organizations develop certification and  
418 qualification programs. These findings point to the importance of developing and engaging in  
419 formal and informal CE programs and for SPPs to embrace LL throughout their professional career.

420 Scholars raised concerns regarding the mandatory participation in CE (Adams & Sharkin,  
421 2012; Neimeyer et al., 2009; VandeCreek et al., 1990), and noted declining engagement with CE by  
422 attendees who have limited interest in learning (Neimeyer et al., 2009). LL has been identified as the  
423 result of personal and individual efforts and, unlike CE, is not formally mandated by professional  
424 organizations. For this reason, fostering individual interest in LL may be a salient focus of education  
425 and professional training. Based on our results, it is evident that LL should be fostered in the early  
426 stages of SPP professional training and practice and then be maintained throughout an individual's  
427 professional journey. It follows that SPPs must seek opportunities to engage in LL, while

428 professional organizations, qualification and training programs, and professional networks should  
429 concurrently foster conditions to facilitate this search. Moreover, based on our results, there remain  
430 opportunities to explore the level, motive, and quality of engagement in CE and LL among SPPs.  
431 Given the varying estimations of the half-life of the profession, it is important that researchers to  
432 continue to differentiate between and promote CE and LL within the sport, exercise, and  
433 performance psychology disciplines. Specifically, we see an important future for LL as a component  
434 of satisfactory, ethical and effective practice and we hope other scholars will take this forward.  
435  
436  
437

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Table 1. Panelists' Characteristics and Demographics

	Country(ies) of practice	Gender	Highest Degree	Specialization	Years of SP Experience	Professional Activity	
						Academic Work %	Applied Work %
1	USA	F	PhD	Performance Dysfunction	15	85	15
2	UK	F	PhD	Performance Development	10	90	10
3	UK	M	PhD	Performance Dysfunction	20	85	15
4	UK	M	PhD	Performance Impairment	20	50	50
5	UK	F	PhD	Performance Impairment	20	95	5
6	UK	M	PhD	Performance Development	30	85	15
7	USA	F	PhD	Performance Development	7	90	10
8	UK	M	PhD	Performance Dysfunction	14	70	30
9	UK	M	PhD	Performance Development	20	90	10
10	UK	M	PhD	Performance Development	13	95	5
11	UK	F	PhD	Performance Development	20	90	10
12	USA	M	PhD	Performance Development	10	0	100
13	USA	F	PhD	Performance Development	11	50	50
14	USA	M	PhD	Performance Dysfunction	6	100	0
15	USA	F	M.S.	Performance Impairment	3	39	61
16	UK	M	PhD	Performance Termination	8	70	30
Mean					14.43	68.38	31.63
Standard Deviations					6.80	30.6	30.6

\* The classification of areas of expertise followed the Multi-Level Classification System for Sport Psychology (MCS-SP; Gardner & Moore, 2004).

Table 2. List of statements offered by the panellists about Continuing Education and Resulting Definition

<b>Continuing Education</b>				
<i>Panellists' responses</i>				
Continuing education is a more organized and formal form of personal and professional development.				
Engagement in relevant professional development activities to ensure knowledge and practice currency and effectiveness				
Continuing education is a part of that lifelong learning concept. It drives you to stay in touch with your profession.				
Formal education that takes place post-compulsory education (e.g., secondary school in the UK)				
Meaningful workshops that do not just "check a box" but enhance practice capability.				
Continuing education is an active, behavioural process of learning that involves staying current with best practices.				
The process of systematically developing in a desired direction				
Continuing education is a formal process of documenting that you are taking steps towards lifelong learning.				
Undertaking additional qualifications to further develop skills and knowledge				
Continuing education is about engaging with various means to up skill knowledge and practical skills. This may be through structured CPD, shadowing, peer supervision/support etc.				
Academic study or further education to ensure that knowledge and competencies remain relevant and in line with current standards.				
Continuing to learn thorough one's career, but continuing education being a more formalized process of delivery and consumption.				
Professionally developed curriculum and resources to advance knowledge				
The process that allows people to continue to learn and develop in a given field				
It relates to being current in one's reading of the literature and in the case of applied work, current best practices in working with athletes.				
Ongoing learning activities that help an individual to fulfil their role competently and maintain currency in terms of knowledge and skills.				
Professional development and CPD activity that furthers a practitioner (or researchers) competencies				
<b>Resulting Definition</b>				
<b><i>Continuing Education</i></b> (CE) as "an ongoing engagement in formally organized and recognized professional opportunities for the development of new knowledge, understanding, and the application of best practice to support a meaningful, ethical, and effective career, as well as to improve services to the public and profession."				
<b>Panelists' evaluation of the definition</b>				
	Exhaustive	Applicable	Important to adhere	Important to foster
Continuing Education	3.89 (1.2)	4.47 (0.51)	4.21 (0.63)	4.42 (0.61)

Table 3. List of statements offered by the panellists about Lifelong Learning and Resulting Definition

<b>Lifelong learning</b>				
<i>Panellists' responses</i>				
Ongoing professional development. Seeking new ways of doing things, and developing new answers to old problems by learning and developing one skillset, competencies, and knowledge.				
A reflective process of continual development to positively enhance oneself.				
A process of engaging in a range of activities to develop knowledge, skills and experience across the duration of a person's career.				
Constant desire to learn and grow. A responsibility to stay current on best practices in the literature and a recognition that research informs applied practice, and applied practice informs research.				
A willingness to want to enquire, update and develop				
it is everything we need to be and do in order to maximize our capabilities, potential and keep growing				
The need for professionals to understand that the profession of SEPP is constantly changing based upon new advancements and research.				
A continuing process of self-development				
A continual development in relation to knowledge and skills.				
The pursuit of learning through various means to expand knowledge and understanding across the lifespan				
Staying engaged with current research, but always thinking of how the research informs practice. Never thinking that one knows it all, but continuing to explore and reflect on readings, information, etc.				
pursuing continuing education opportunities, using daily reflection to consider areas of growth, knowing that you will never know everything and you will learn your entire life				
Learning and self-development that continues through life without reaching limits of knowledge				
A consistent process of self-reflexivity				
Continuous professional development over a person's career to ensure sustained evidence based practice				
Learning that takes place formally and informally through experiential, professional development and formal education				
A personal and professional commitment to continually further your education, to improve depth of understanding and competency in actively applying relevant skills, through formal academic and ad hoc study.				
Lifelong learning is the continued effort to become as knowledgeable, capable, and current in every area of your practice - be it applied, teaching, research, assessment, etc.				
interest in continuing education both for applied goals and because of a genuine interest in learning across ones career				
Purposeful efforts to continue improving as a practitioner until I am no longer practicing.				
Having a growth mindset. An approach to information where you are always open to feedback, suggestions, and new research to inform yourself in your practice or in any area of life				
Seeking opportunities to acquire new knowledge and skills as well as to develop and refine those already held.				
Lack of representation of the importance of relating, relationships and connecting with people in engaging ways				
<b>Resulting Definition</b>				
<b><i>Lifelong learning</i></b> (LL) as "one's desire to explore and engage in ongoing information-seeking and self-reflective activities to satisfy one's personal curiosity and self-development throughout one's career, but which are not necessarily a professional obligation."				
<b>Panelists' evaluation of the definition</b>				
	Exhaustive	Applicable	Important to adhere	Important to foster
Lifelong Learning	3.79 (1.08)	4 (0.75)	3.95 (1.03)	4.32 (0.75)

Table 4. List of statements offered by the panellists about the delivery and assessment of CE

<b>Based on your experience as an SEPP professional, ...</b>
<b>...what would you describe to be the main and most effective methods to deliver CE?</b>
<p>Interactive, group or 1-1 sessions, aligned with opportunities to interact with other professionals (e.g., webinar or conference).            Follow-ups are very important; too often webinar knowledge is not reinforced.            On-line /web based modes - webinars, on-line conferences            Online webinars and videos are the best way to deliver continuing education. It is more convenient and cost effective.            Blended learning - using online and face-to-face contact to support learner needs and to provide different approaches to engaging in learning.            DEP method, incorporating a didactic, experiential, and process component to a seminar/workshop.            Face-to-face, shadowing/mentoring, live is preferred, in lectures or symposiums, on-line discussion forums or Zoom meetings            Face-to-face contact with opportunity for sharing thoughts with others            Experiential learning, peer support, reflective practice, CPD events            Web-based methods increase the access to CE that can be multiple and diverse. That said traditional courses and workshops are important where practical delivery is required. Matching the method to the intended outcomes to enhance the experience of those taking part is critical.            It varies. Certain things work better in certain formats. Workshops providing experiential learning, webinars, lectures all have their place.            Concise reading; workshops and conferences;            Conference, online workshops and symposia are good.            Face to face workshops where knowledge can be communicated, discussed            Professional development workshops, learning at conferences, engagement with professional practice groups            Power workshops where you have a group of professionals give brief summaries, TED-talk style.            Workshops and online webinars            In-person learning with structured follow-up by CE professionals to continue focus on certain learned skills.            Use up to date literature/evidence-based practices; make the presentation interactive            Podcasts and workshops            Practical and experientially orientated workshops</p>
<b>...what would you describe to be the main and most effective way to assess the outcome of CE?</b>
<p>Personal reflections and portfolios.            Reflections to how knowledge and practice has developed over time - within this there would need to be an aspect of social validation to ensure that the recipient of the service (e.g., client) is benefitting as a result.            Surveys given to those receiving the information and possibly the clients as well.            Engagement metrics and reflective practice - the learner's reflections on their journey from the start to the end of the activity and an understanding of how they have applied the learning into their practice.            With a six month follow-up rather than just immediately after the training            Mixed methods -- both qualitative and quantitative means of assessment.            Application, watching them at work.            Content based questions to address overall competency            Tests for knowledge/understanding at the end of the program            Demonstration of practical application of the skills and knowledge learnt            Practical portfolios-video-based-voice recorded reflections/discussions, blogs            Assessment should directly suit the objectives of the education course. No one method would be prioritised here.            Perceived satisfaction and contribution of the workshop to self-development.            Real assessment would come from one's own practice and self-reflexive practice. A follow-up survey is one thing, but real assessment would have to occur over time to see if the skills and knowledge were actually put into practice and maintained.            Assessment could range from a reflection evidence informed and based portfolio to a oral face to face viva.            Case study methods            Assessment through achievement of stated learning outcomes is the standard process. Learner satisfaction is also relevant.            After program survey and subsequent follow-up            Feedback from practitioners and their clients, both before and after CE, and compare this feedback            Poll practitioners longitudinally on the effect the CEUs have on their day to day practice            Engagement figures, evaluation feedback sheets            Discussion</p>

Table 5. List of statements offered by the panellists about the delivery and assessment, content, and impact of CE

<b>Based on your experience as an SEPP professional, ...</b>
<b>...what areas of the professional practice would do you think would be the most impacted by engaging in professional CE?</b>
New applied techniques, tools to assist in developing a professional practice business, counselling skills, new theoretical advances understanding better the processes of delivery - much of what we read is about outcomes but detail to the processes and enhancing the client experience would be impactful
How we treat our athletes and clients from either a research or clinical standpoint. The more we learn the more effective we will be at providing better treatment for our clients.
Knowledge of sport and exercise psychology and contemporary issues.
Integrating evidence-based methods and widening practice options
Knowledge base of the consultant, which would hopefully enhance the skill set of the consultant, which would ideally impact athlete outcomes.
Current practice i.e. being up-to-date on new developments/ways of doing things and reflection
Practicums and case study learning
Ethical decision making, knowledge of issues that continue to change, such as multicultural awareness, evidence based practice.
Increased ability to deliver sessions with clients through enhanced levels of knowledge and skills
Counselling skills, evaluation techniques, developing communication and rapport skills
Currently, there is probably a bias toward theoretical understanding. In the sport and exercise sciences I believe we can do more to upskill professional or practice related methods and competencies. I would go to psychology here for CE.
Ethics (we need that over and over again...); interviewing techniques, how to work with those who are peripheral to the athlete, e.g., parents, significant others, coaches, physicians; helping the athlete cope with "bad news" (injury, being cut from the team); understanding the importance of working with the lower level participants in sport, especially children's programs, non-elite recreational/club/school teams; learning how to "refer out" appropriately, and building the best referral network possible for your practice.
All aspects can be impacted by carefully developed and administered educational programs.
Ethics, multicultural, mentorship
Professional judgement and decision making with clients; self-awareness
The most impact is from modules or workshops on lesser talked about issues, like gender violence and diversity issues in the applied domain. Client interactions
Dealing with novel and more complex case formulations/problem solving
Competency as a provider depends on ongoing continuing education to continue to refine skills, learn and develop skills in new competencies.
Interventions and case conceptualizations
Quality of care; Assessment; Ethics
Therapeutic techniques and approaches
Client-centered approach; self-evaluation; communication skills
<b>...what areas of the professional practice should be the main focus of professional continuing education?</b>
Professional tools, peer-mentoring, professional development, networking
Accounts of esteemed individuals to what they did and how.
Learning how to provide the best treatment for clients would benefit the most when it comes to professional continuing education.
Developing innovative and evidence-based interventions, Self-care - personal coping of practitioners as performers, Contemporary issues in ASEP literature
Current evidence-based practice and skill development
Evidence-based and theory-informed practice
Theory to practice activities and evaluating impact
Ongoing practicums, and supervision when available
Ethics, multicultural awareness, evidence based practice, best practices approaches to consulting.
Application of knowledge
Counselling skill development-most neophytes in my experience often lack the critical skills of counselling
Ethics, diversity, latest research, best practices for referring out.
Professional continuing education can occur in all areas.
Ethics, multicultural and diversity training, crisis intervention
Theory-practice; evidence-based strategies to inform work
Issues of gender violence in sport, and diversity and multiculturalism issues in the field, including harassment, bullying, LGBT issues, and the intersection of race, class and gender.
Evidence based practice
Applied 'real life' scenarios - the things that aren't in the text books...
(1) populations - to increase competencies for working with different individuals; (2) intervention skills (mindfulness, relaxation, attention training, etc) - to develop new applied skills.
Ethics, practicing within competency, basic clinical skills, and guidelines for having a practice.
Clinical mental health
Interventions and case conceptualizations
Proper interventions; Assessment; Ethics
Similar to my last answer, therapeutic approaches and skills in delivery.
From a research perspective, research methods and analysis.
From an evaluation perspective, how to effectively evaluate complex, large scale interventions.
Consultant effectiveness; interpersonal skills; client centered approach

Table 6. Panelists' engagement and perception of Continuing education

<b>Continuing education in the field of SEPP over the next 10 years,...</b>				
	<b>M (SD)</b>	<b>% of Agreement</b>	<b>M (SD)</b>	<b>% of Agreement</b>
<b>...to what extent do you expect each of the following delivery formats to increase or decrease?</b>				
On-site presentations	2.53 (0.77)	89.47		
On-site interactive group activities	3.21 (0.98)	63.16*	2.5 (0.52)	100
On-site experiential workshops & activities	3.11 (0.99)	36.84*	2.75 (0.58)	62.5*
Conference presentations	3.26 (0.56)	78.95		
Professional practice groups	3.58 (0.69)	89.47		
Blended (online + in person) activities	4.11 (0.74)	63.16*	4.25 (0.58)	62.5*
Recorded internet delivered video based training (e.g., podcast, TED talks)	4.47 (0.7)	89.47		
Internet delivered text based training (e.g., slide show, text based program)	4.26 (0.81)	78.95		
Live internet based training (e.g., webinars)	4.58 (0.69)	68.42*	4.63 (0.5)	62.5*
<b>...to what extent do you believe that each of the following of the assessment process is likely to increase or decrease?</b>				
Assessment of the overall CE learning?	3.42 (0.84)	78.95		
Assessment of the specific aspects of the CE learning?	3.63 (0.68)	89.47		
Number of hours of engagement with CE?	3.74 (0.65)	52.63*	3.25 (0.58)	81.25
Evidence of application of the material learned in CE training?	3.74 (0.73)	57.89*	3.56 (0.63)	93.75
Assessment during the CE learning?	3.58 (0.69)	89.47		
Assessment following the CE learning (e.g., 6 month follow	3.42 (0.84)	78.95		
Reflection-based assessment?	3.84 (0.83)	47.37*	3.88 (0.72)	50*
Assessment of the knowledge developed with the CE training?	3.47 (0.7)	57.89*	3.19 (0.54)	68.75*
Assessment of the skills developed with the CE training?	3.53 (0.77)	84.21		
Assessment of the competence developed with the CE training?	3.74 (0.65)	68.42*	3.44 (0.73)	87.5
Participants' perceived satisfaction?	3.63 (0.96)	68.42*	3.56 (0.89)	75
Experts' direct assessment via practice observation?	3.37 (1.07)	57.89*	2.81 (0.98)	62.5*
Case-based assessment methods?	4 (0.58)	68.42*	3.63 (0.81)	81.25
<b>..to what extent do you believe that it will... (Very little - Great deal)</b>				
Increase professional knowledge	4 (0.75)	63.16*	3.75 (0.77)	81.25
Keep professionals up-to-date	4.05 (0.71)	52.63*	4.06 (0.85)	81.25
Translate into practice	3.84 (0.76)	42.11*	3.44 (0.81)	81.25
Maintain professional competency	3.84 (0.76)	42.11*	3.75 (0.58)	68.75*
Enhance professional competency	3.84 (0.76)	42.11*	3.81 (0.75)	62.5*
Protect the public	3.89 (0.88)	68.42*	3.5 (0.82)	81.25
Enhance outcomes	4 (0.82)	36.84*	3.56 (0.81)	81.25
<b>...to what extent do you believe that it will... (Decrease - Increase)</b>				
Focus on contextual specializations (i.e., exercise, sport, performance)	4.21 (0.85)	89.47		
Focus on population (i.e., exercisers, amateur athletes, professional and elite athletes, artists, military, coaches, etc)	4.26 (0.93)	78.95		
Focus on content specializations (i.e., clinical, educational)	4.05 (0.91)	63.16*	3.81 (0.75)	43.75

Table 7. Panelists' engagement and perception of Continuing education

Panelist	Importance of CE to support LL*	Continuing Education Time			Continuing Education			Lifelong Learning		
		Planning	Delivery	Attend	Involvement	Interest	Investment	Involvement	Interest	Investment
1	4	10	30	60	35	90	45	20	75	10
2	4	40	40	20	60	60	50	40	60	40
3	5	20	50	30	90	100	40	50	100	70
4	5	40	10	50	70	90	50	50	70	50
5	4	10	65	25	70	81	61	71	76	62
6	5	15	17	68	30	86	30	92	92	73
7	4	50	45	5	70	90	30	30	50	10
8	5	20	60	20	70	80	80	81	80	80
9	5	45	14	41	80	87	54	81	94	32
10	4	29	50	21	70	70	50	60	76	51
11	5	30	60	10	20	80	20	20	80	15
12	4	40	40	20	50	100	17	10	10	10
13	5	0	20	80	70	100	70	50	40	50
14	3	0	0	100	71	85	30	30	40	10
15	4	0	0	100	19	82	71	61	29	74
16	5	20	70	10	20	55	15	10	70	10
M	4.44	23.06	35.69	41.25	55.94	83.5	44.56	47.25	65.13	40.44
SD	0.61	16.7	23.18	31.59	23.47	13.02	19.91	25.98	25.11	26.75

\*Note: This question was answered using a 5-point Likert Scale 1 = "not important at all", 5 = "very important"

**Figure 1. Flow chart of the study design**

