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Resilience in Adapted Paddle coaches

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Título: La resiliencia en entrenadores de Pádel Adaptado.
Resumen: En el Deporte, la mayoría de los estudios sobre resiliencia se han centrado en deportistas, siendo reducido el número de investigaciones con entrenadores, sobre todo en el ámbito del deporte adaptado. Por ello, los objetivos del trabajo son: describir las características de resiliencia de entrenadores de Pádel Adaptado desarrollando baremos específicos para muestra analizada; establecer posibles diferencias en los niveles de resiliencia considerando variables personales y deportivas; establecer posibles relaciones entre los niveles de resiliencia, la edad y experiencia; comparar los niveles de resiliencia de la presente muestra con los resultados de estudios precedentes y determinar los niveles de fiabilidad obtenidos con la escala de resiliencia utilizada. La muestra estaba integrada por 111 entrenadores de pádel adaptado, a los que se aplicó dos instrumentos: cuestionario sociodemográfico para entrenadores de Pádel Adaptado (Ruiz, 2004; Ruiz-Barquín, De la Vega, De la Rocha y Batista, 2015a) y la adaptación al castellano del cuestionario de Resiliencia (Ruiz, De la Vega, Poveda, Rosado y Serpa, 2012). Los resultados señalan un alto porcentaje de entrenadores con alta resiliencia (35.10%), mostrando niveles superiores a anteriores estudios y adecuados niveles de fiabilidad. La ausencia de diferencias significativas considerando las variables personales y deportivas, y las implicaciones de prácticas derivadas de los resultados obtenidos, son discutidas.
Palabras clave: Resiliencia; entrenadores; pádel; deporte adaptado.

Abstract: In Sport, most research on resilience is focused on athletes, with quite a low amount on coaches, especially regarding adapted sport. Therefore, the aims of this research are: to describe the resilience characteristics of Adapted paddle coaches by developing specific scales for the sample under study; to establish possible differences in the total resilience levels considering different personal and sport variables; to establish possible relationships between the resilience levels of Adapted Paddle Coaches and the age and experience variables; to compare the resilience levels within the current sample with results in previous studies; and to evaluate reliability levels obtained with the resilience scale used. The sample comprised 111 adapted paddle coaches, to whom two questionnaires were given: a sociodemographic one for adapted paddle coaches (Ruiz, 2004; Ruiz-Barquín, De la Vega, De la Rocha y Batista, 2015a) and the Spanish version of resilience (Ruiz, De la Vega, Poveda, Rosado & Serpa, 2012). The results conclude that the sample group has a large percentage of coaches with high resilience (35.10%), showing higher levels than those in previous studies, and appropriate reliability levels. The absence of significant differences, taking into account the personal and sport variables, and the implications of practices deriving from the results obtained, are discussed in the article.
Key words: resilience; coaches; paddle; adapted sport.

Introduction

Despite multiple definitions, resilience is considered a set of psychological characteristics observed in certain individuals, allowing them to face, resist or overcome negative and adverse life situations more effectively and with greater coping resources than most people exposed to these same circumstances (Schiera, 2005; in Ruiz-Barquín, De la Vega, de la Rocha & Batista, 2015a). The scientific community's interest in the study of these characteristics has covered different contexts, focusing on the study of populations that, by their very nature, are exposed to vital or labor conditions that could be considered adverse. Recent studies serving as an example are those on resilient characteristics in the context of disability resulting from traffic accidents (Suriá, 2012, 2015), in the adaptation of children in foster care (Gil-Llario, Molero-Malles, Ballester-Arnal & Sabater, 2012), or in patients with chronic pain (Alschuler, Kratz & Dawn, 2016).

Similarly, studies have tried to go further, not only in the resilient characteristics of the population that must face adverse conditions, but also in people who that help them in the processes of adapting to their current situation. In this sense, resilient profiles have been studied in the care and quality of life of the elderly (Hildon, Montgomery, Blane, Wiggins & Netuveli, 2010); (Ruiz-Barquín et al. 2015a), or in the case of cancer caregivers (Simpson et al. 2015).

Within the area of sport, in studies performed in the context of Sport Psychology and the Sciences of Physical Activity and Sport, there is a clear imbalance between the interest in the description and analysis of resilience characteristics in the context of high level sport and of performance or competitive sport (De la Vega, Ruiz & Rivera, 2012a, Fletcher & Sarkar, 2012, García et al. 2015, Reche & Ortín, 2016; Ruiz, De la Vega, Poveda, Rosado & Serpa, Ruiz-Barquín, De la Vega & Álvarez, 2013, Ruiz-Barquín, de la Vega & Marchant, 2016, Ruiz-Barquín, de la Campo & de Vega, 2015b, Sarkar & Fletcher, 2014), and interest shown in the possible role played by professionals at work (coaches, physicians, physiotherapists, physical trainers, psychologists, among others) to generate optimum levels of adaptation of the athletes in a context where they areoften subjected to imbalances or heterostasis (De la Vega, 2016).

The number of studies concerning the resilience characteristics of coaches and sports coaches is quite low compared with those with athletes of different disciplines and sports levels (Ruiz-Barquín et al. 2015a). This data highlights important gaps in knowledge about this matter, particularly relevant being the development of specific studies, since it is coaches who spend more time and have more interaction with the athletes and who are ultimately responsible for maximizing the possibilities of expression and development of resilience in these athletes. The qualitative study by White and Bennie (2015) stands out, with 7 coaches of 22 female

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gymnasts, finding that environment characteristics, interpersonal relations and the trainer's positive behavior all help in the optimal coping of adverse situations. These results agree with studies on the effect on the self-efficacy of the feedback offered by coaches, where it is found that moderate negative feedback can have a negative modulating effect on the perception of the athlete's effectiveness and on their capacity for coping (De la Vega, Ruiz-Barquín, Fuentealba & Ortín, 2012b, De la Vega, Ruiz-Barquín, Batista, Ortín & Giesenow, 2012c). In addition to the study by White and Bennie (2015), a study by Howard and Johnson (2004), should also be highlighted which focuses on the characteristics that teachers have in dealing with stressful situations, instead of focusing on those who have suffered acute episodes of burnout, finding, among other relevant results, that high scores in resilience, measure the link between work stress and potential burnout, this being of interest in current research in sports psychology (De Francisco, Garcés de los Fayos & Arce, 2014, Harris & Watson, 2014, Mandigan, Stoebery Passfield, 2015, Vitali, Bortili, Bertinato, Robazza, & Schena, 2015).

Given these initial premises, it is pertinent to deepen the resilience characteristics of sports coaches who wish to develop their professional work in a context where dedication and involvement are essential, such as disabled sports, whether intellectual or sensorial (De la Vega & Rubio, 2015). The coach may encounter obstacles and adversities that hinder their work and reduce their tolerance to adversity and stress, directly or indirectly reducing their effectiveness. It should be said that a main limitation in studies in the context of adapted sport is the neglect of study about the characteristics that coaches should have when working in this broad context (De la Vega, 2016). In this sense, adapted paddle is an excellent field of study, since there has recently been abloom in projects of inclusive sport where further research is necessary into the qualities of sports coaches in order to optimize the teaching-learning process. Serving as an example, the ASPADO (www.padeladaptado.com), a non-profit organization with a large presence in Spain, has created, since 2007, a total of 28 paddle schools countrywide, for its essential role in the development of students with intellectual disabilities. Undoubtedly, growing social demand requires the development of research that responds to existing needs

The aims of the study are: to describe the resilience characteristics of Adapted Paddle coaches by developing specific scales for the sample under study; to establish possible differences in total resilience levels considering different personal and sport variables; to establish possible links between the resilience levels of the Adapted Paddle coaches and the age and experience variables; to establish comparisons of resilience levels of the sample of Adapted Paddle trainers with the results obtained in previous studies; And to determine reliability levels obtained with the scale of resilience used.

Method

The study performed is descriptive and correlational. According to Montero and León (2007), it would be an instrumental study of empirical character and based on a quantitative methodology

Participants

The sample comprises 111 paddle trainers (28 women), with a mean age of 34.75 years (*SD* = 8.67), aged between 19 and 58 years old. All participants were selected according to the accessibility criteria, all being of legal age. Some of the main sociodemographic characteristics of the sample are:

- 43.8% (*n* = 49) are ASPADO Foundation trainers (internal), while 56.3% (n = 63) are trainers from outside the association.

- 93 coaches responded to being Paddle coaches, with 49.5% (*n* = 46) "total" and 50.5% (n = 47) "partial ". The average work of the coaches is 17.85 hours weekly (*SD* = 11.79). Years of experience are between 1 and 22 years, with a mean of 6.13 (*SD* = 5.12).

- Experience as a coach of other sports is between 1 and 3 years, the average being 1.22 (*SD* = .051).

- 65.9% of the coaches (*n* = 56) carry out their professional activity in only one centre, while 34.1% (*n* = 29) in several. At the same time, 19.3% (*n* = 16) work in public sports centres (*n* = 16), 45.8% in private centres (*n* = 34.2) and 34.9% in both types of centre.
- Regarding the level of studies, response rate was 92.4% (*n* = 109), where 3.7% had primary studies (*n* = 4), 45.4% had secondary studies (*n* = 49), and 50.9 % university studies (*n* = 55).
- As for the question on being an adapted paddle coach to athletes with some form of disability, the response rate was 82.9% (*n* = 92), answering affirmatively 27.2% (n = 25) and 72.8% % (*n* = 67) negatively.
- Concerning the type of disability, 23 coaches responded. The evaluated coaches largely work with those with Intellectual Disability (21.7%, *n* = 5), those with Intellectual Disability and Motor Disability (30.4%, *n* = 7), and persons with Intellectual, Sensorial and Motor Disability (17.4%; *n* = 4). There is a smaller number of trainers who work with Motor and Sensory disability (4.3%, *n* = 1), and those who work exclusively with people with Motor Disabilities (13%; *n* = 4) or with Sensory Disabilities (4.3%; n = 1).

Instrumentation

- A Socio-demographic questionnaire for Adapted Paddle Coaches (Ruiz, 2004; Ruiz-Barquín et al. 2015a, see Annex I). The questionnaire is an adaptation of the interview for Judo coaches, whose initial structure comprised 60 ques-

tions and 20 areas corresponding to sociodemographic and sports data (Ruiz, 2004). Subsequently, a shorter adaptation was carried out with 18 questions in the sport of Athletics (Ruiz-Barquín et al. 2015b). This last abbreviated version was adapted by the authors to the sport of Paddle used in the present research.

- Resilience scale developed by Wagnield and Young (1993) adapted to Castilian Spanish (Ruiz et al. 2012). The scale comprises two factors (Factor I: Personal Competence, α = .765; Factor II: Acceptance of life and self, α = .494 and an overall score; A = .808) and 25 items with seven Likert type scale responses (from "1", strongly disagree; to "7" strongly agree).

This instrument has been widely used in the field of Sport Psychology, both with athletes and coaches (Ruiz et al. 2012; Ruiz-Barquín et al. 2015b).

Procedure

The tests were administered in two ways: one collectively through the courses for Adapted Paddle monitors between the months of April 2013 and September 2014, and another one individually (during the same time period) to the Paddle coaches who had already taken the course in previous editions and were working as Adapted Paddle coaches. Prior to completing the study, ASPADO managers were informed of its aims. These were then reported to the participating coaches themselves, receiving the corresponding informed consent, participating voluntarily, and not applying any type of incentive.

Given that the present study belongs to a larger research project where a battery of complementary tests was administered to those included in the present study, the average overall application time was set at between 30 and 35 minutes for both individual and collective administration carried out in a single administration, with the completion of the sociodemographic questionnaire and the resilience questionnaire at between 15 and 20 minutes.

The administration of tests was carried out for all participants in proper adapted facilities belonging to ASPADO.

Data Analysis

Statistical analyses were: Descriptive analysis of central tendency, calculation of asymmetry and kurtosis of items, frequency analysis, normality tests using the Kolgomorov-Smirnov test, analysis of mean difference for one sample (Student t), Mean difference analysis for two independent samples using Student t-statistic, variance homogeneity test using the Levene statistic, Pearson correlation analysis and reliability calculation using Cronbach's Alpha Coefficient. In the latter analysis, an item analysis will be performed calculating the mean of the scale if the item is removed, the variance of the scale if item is removed, the item and total correlation test, and the Cronbach Alpha Coefficient (α) if the item is removed.

Results

As for the first objective "*to describe the resilience characteristics of Adapted Paddle coaches by developing specific scales for the sample under study*", a score of 99.71 (*SD* = 8.20) was obtained in Factor I, and in Factor II an average score of 42.15 (*SD* = 4.93). The overall score of the scale was 141.86 points (*SD* = 11.26) finding that 44 coaches showed high resilience (35.10%, score ≥ 147 points), following the criteria established by Wagnield and Young (1993) and by Vigário, Serpa And Rosado (2009).

The descriptive factors are presented in Table 1.

Table 1. Descriptors of the two factors and total score of the Resilience scale.

	M	*SD*	Min.	Máx.
Personal Competence	99.71	8.20	74.00	114.00
Acceptance of oneself and of life	42.15	4.93	28.00	54.00
Total Sum	141.86	11.26	111.00	164.00

Table 2 shows the descriptors of the items of the Resilience scale for the sample under study.

Table 2. Descriptors of the items of the Resilience scale.

	M	*SD*	*Asymmetry*	*Kurtosis*
Item 1	5.90	1.01	-.989	1.285
Item 2	6.21	.75	-.624	-.128
Item 3	5.07	1.28	-.425	.391
Item 4	6.43	.87	-2.320	7.446
Item 5	6.14	1.00	-1.857	5.928
Item 6	6.45	.82	-1.415	1.227
Item 7	5.88	1.08	-1.054	.976
Item 8	5.86	1.25	-1.403	2.190
Item 9	5.49	1.24	-.853	1.026
Item 10	5.82	1.18	-1.073	.948
Item 11	2.86	1.75	.844	-.292
Item 12	5.34	1.22	-.410	-.402
Item 13	5.77	1.06	-.658	.146
Item 14	5.97	1.13	-1.019	.585
Item 15	6.21	.88	-1.497	4.004
Item 16	6.15	.96	-1.014	.412
Item 17	6.09	.90	-.637	-.512
Item 18	6.35	.85	-1.201	.688
Item 19	5.36	1.25	-1.030	1.804
Item 20	3.99	1.75	-.214	-.951
Item 21	6.55	.81	-2.709	10.065
Item 22	3.96	1.80	-.163	-1.088
Item 23	6.01	.96	-1.534	5.507
Item 24	6.44	.72	-1.193	1.060
Item 25	5.55	1.46	-1.276	1.730

It can be observed that the items with the highest average scores are 2, 4, 5, 6, 15, 16, 17, 18, 21, 23 and 24. On the contrary, the lowest scores are 11, 20 and 22.

As for the most discriminatory items (with the highest standard deviation), items 1,3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 19, 20, 22 and 25 are highlighted. The lower discriminative capacity shown is 2, 4, 6, 15, 16, 17, 18, 21, 23 and 24.

With regard to the degree of item asymmetry, Table 2 shows how the asymmetry indexes (Pardo & Ruiz, 2013) obtained negative values and less than "0", except for item 9, obtaining in all items atypical error of .229. Within items with negative values, those close to value "0", such as items 3, 12, 20 and 22, are distinguished from those with negative values that are farthest from value such as items 4, 5, 15 and 21.

As for the degree of kurtosis obtained (Ruiz & Pardo, 2013), we can observe that most items have a platykurtic distribution (<3), although items 4, 5, 15, 21 and 23 present a leptokurtic distribution. In this case, the typical error obtained is .455.

The cumulative frequency analyses performed indicate that the average score of the questionnaire practically coincides with a cumulative frequency of 50% (M = 141.86 corresponds to a cumulative frequency of 47.7%, there is practically an overlap between the mean and median values), and therefore, this data is congruent with the results derived from the normality tests performed and that are shown in the results obtained in the following aim.

Given the interest of the present study in specifically describing the resilience characteristics of the sample used, as well as offering maximum utility and practical implications, the scales of the sample under study are included in Annex II.

To develop objective nº2 "*to establish possible differences in the total resilience levels considering different personal and sport variables*", prior to the performance of the analysis of difference in means, the normality testis applied for the total resilience score and the two factors they comprise. It can be verified how in all three cases, the scores are distributed normally (Total resilience, z = .760; p = .610; Factor I, z = 800; p = .544; Factor II, z = .688; P = .730).

In order to carry out the analysis of difference in means, the quantitative age and experience variables have been changed. Given that a search of the literature of previous studies did not find a unitary criterion at the theoretical or empirical level for the division of the sample of coaches according to the age variable, a statistical criterion has been used. A frequency analysis was performed, dividing the sample into two subgroups: a younger age group, where coaches were between 1 and 50 years of age, and a second group with centiles above the 50th centile: The remaining groups were Group 1 (younger age) between 19 and 34 years, and group 2 (older) between 35 and 58 years.

With respect to the experience variable, and following recommendations made by García-Naveira and Ruiz-Barquín (2013), the sample was initially divided into three large groups: Less than 10 years of experience, between 10 and 20 years, and more than 20 years. Since the frequency analysis showed that only two participants in the study had more than 20 years of experience (22 years in both cases), it was finally decided to form two groups: a low experience group (less than 10 years) and a high experience group (between 10 and 22 years).

The mean difference analysis for two independent samples is presented below in table 4 using the Student's t-statistic.

Table 4. Analysis of differences in means between the different personal and sports variables considered.

Variable	Group	*N*	*M*	*SD*	Levene´s Test		*t*	Sig
					F	Sig.		
AdaptedPaddle Exercise	Yes	25	142.120	11.25	.029	.866	-.012	.991
(*n*=92)	No	67	142.15	11.43				
Internal/ External	Internal	48	143.17	9.72	4.001	.048	1.097	.275
(*n*=111)	External	63	140.87	12.30				
Age	Between 19 and 34 Years	58	141.38	11.37	.019	.891	-.409	.683
(*n*=109)	Between 35 and 58 years	51	142.27	11.42				
Experience	Between 1 and 10 years	74	140.38	10.90	.719	.399	-1.775	.079†
(*n*=90)	Between 11 and 22 years	16	145.56	9.51				
Sex	Male	83	141.81	11.39	.494	.484	-.092	.927
(*n*=111)	Female	28	142.04	11.10				

† $p < .10$

Results show the absence of significant differences in the variables considered, only observing results with a statistically significant trend in the "experience" variable, where the oldest group obtains a higher score (practically the 147 points indicated by Vigário et al. 2009 that considers a person as having high resilience).

Regarding Aim 3 "*to establish possible relationships between the resilience levels of Adapted Paddle Coaches and the age and experience variables* ", the Pearson Correlation was used to establish relationships between the score between the total resilience score and the age and experience variables, showing the absence of relationships with the former (r = .084; p = .385), but the presence with the latter (r = .220; p = .037), although this is reduced and positive. In this case, there are no significant correlations between age and experience (r = .166; p = .116).

Regarding aim º4 *"To establish comparisons of resilience levels of the sample of adapted Paddle coaches with results obtained in previous studies",* table 5 shows the descriptive and high resilience percentages in each study considered.

Table 5. Descriptions of the previous studies carried out in sport and the present study with adapted paddle coaches.

STUDY	*PT M (SD)*	S min	S. max	*% Cutoff*	*FI M (SD)*	*FII M (SD)*
(1) Football players Ruiz et al. (2012) *n* = 110	135.74 (13.88).	75	164	22%	94.52 (9.64).	41.22 (5.22).
Long distance runners 2). De la Vega et al. (2012a) *n* = 318	138.58 (15.90)	56	170	32.50%	97.18 (11.36).	41.40 (5.90).
(3) Various Sports Ruiz-Barquin et al. (2013) *n* = 191	135.17 (12.91).	96	172	21.40%	94.57 (9.86).	40.60 (4.70).
(4) Athletics coaches. Ruiz-Barquín et al. (2015b) *n* = 30	141.00 (11.54).	102	158	36.67%	99.80 (8.08).	41.20 (4.70).
(5) Sports, collective and individual Sports Garcia et al. (2015) *n* = 235	118.75 (16.89).	----	----	3.80%	---	---
(6) Fencers RECHE and Ortín (2016) *n* = 81	132.06 (18.65).	68	163	20%	92.68 (13.59)	39.64 (6.43).
Adapted paddle Coaches (7) Present study. *n* = 1117	141.87 (11.26).	111	164	35.10%	99.71 (8.20).	42.15 (4.93).

TS = Total Score; S. min = Minimum score; S. max = Maximum score; % Cutoff = Percentage of subjects with high resilience; FI = Personal Competence; FII = Acceptance of oneself and life.

The results show that the highest mean scores in the total resilience score and factor 2 are for Adapted Paddle coaches (*M* = 141.87 and *M* = 42.15 points, respectively). However, the highest scores on Factor I are for the sample of coaches of High Performance Athletics (M = 99.80 points). These two studies with coaches are followed by the high scores of long distance runners (M = 138.58 points), with the remaining studies' scores being significantly lower.

As for the percentage of sports subjects or coaches with high resilience, we can observe how only the studies of long distance runners, athletics coaches and Adapted Paddle coaches exceed 30% of subjects with high resilience, the two studies with coaches being those that obtained higher percentages (36.67% for Athletics coaches and 35.10% for Adapted Paddle coaches).

In order to determine if there are statistical differences between the scores obtained with Adapted Paddle coaches from the rest of studies, the corresponding analysis of difference of means is performed through the student t statistic for a sample.

Table 6. Analysis of difference in means for a sample using Student t-statistic.

	Personal Competence				Acceptance of life and oneself				Total Resilience			
	DM	*t*	*df*	*p*	*DM*	*T*	*df*	*P*	*DM*	*t*	*df*	*p*
1-7	5.19	6.672	110	.000***	.93	1,995	110	.048*	6.12	.5728	110	.000***
2-7	2.53	3.254	110	.002**	.75	1.610	110	.110	3.28	3.072	110	.003**
3-7	5.14	6.608	110	.000***	1.55	3.321	110	.001***	6.69	6.261	110	.000***
4-7	-.09	-.113	110	.910	.95	2.038	110	.044*	.86	.809	110	.420
5-7	---	---	---	---	---	---	---	---	23.11	21.618	110	.000***
6-7	7.03	9.037	110	.000***	2.51	5.374	110	.000***	9.80	9.170	110	.000***

*p<.05; ** p<.01; ***p<.001

(1) Ruiz et al. (2012); (2) De la Vega et al. (2012a); (3) Ruiz-Barquín et al. (2013); (4) Ruiz-Barquín et al. (2015b); (5) García et al. (2015); (6) Reche y Ortín (2016); (7) Adapted paddle coaches. Present study.

In Table 6, it can be seen how the greatest differences are shown in the scores corresponding to the total scale and to Factor I "Personal Competence". In this factor, it is seen how Adapted Paddle coaches obtained significantly higher scores than with the other groups (odds of p <.001 and p <.01) with the exception of the group of high performance Athletics coaches (t = -113; p= .910), where lower scores are obtained but these do not show significant differences.

Regarding Factor II "Acceptance of Life and One Self", Adapted Paddle coaches' scores show statistically significant differences with all groups (probability of p<.001 and p<.05) with the exception of the study with long distance runners (Despite the group of Adapted Paddle coaches obtaining higher scores, t = 1.610; p= .110). In this case, the greatest differences are achieved with study nº3 of samples of various sports, and nº6 of samples of fencers (both with p<.001).

However, there are smaller but significant differences, with study nº1 of footballers (Ruiz et al. 2012) and number 4 of athletics trainers (Ruiz-Barquín et al. 2015b).

If the total resilience score is considered, all differences found are $p<.001$, with the exception of study nº2 with long distance runners ($p<.01$).

To observe the high resilience levels of Adapted Paddle coaches in a practical way, taking the scales presented in Annex II of the present article, we can see in what centile the average scores of the previous studies are located: Both the first study with footballers (Ruiz et al. 2012) the third study with samples belonging to team and individual sports (Ruiz et al. 2013), would be at a 30th centile; The average scores of athletes with higher resilience levels (long distance runners), De la Vega et al. (2012a), would be at a 40th centile; The average of the fourth study made up of High Performance Athletics coaches would be in the 45th centile; In the fifth study carried out with a large sample of athletes (García et al., 2015), it would only reach a height of 4. Finally, in the sixth study with fencers (Reche and Ortín, 2016) the centile would be 25.

If we take the criterion of Vigario et al. (2009) based on Wagnield and Young (1993) to define if a person has high resilience (≥ 147 points), this would be in the centile 65 considering the established scales.

Finally, considering the aim "*to determine the levels of reliability obtained with the scale of resilience used*", table 7 shows the reliability levels obtained in the present study in comparison with previous studies.

Table 7. Analysis of reliability and comparison with previous studies.

	(1) Football players Ruiz et al. (2012) n = 110	(2) Long distance runners De la Vega et al (2012a) n = 318	(3) Several Sports Ruiz-Barquin et al. (2013) n = 191	(4) Athletics Coaches Ruiz-Barquin et to the. (2015b) n = 30	(5) Collective and individual sports. Garcia et al. (2015) N = 235	(6) Fencers Reche and Ortín (2016) n = 81	(7) Adapted paddle coaches. Current study (n = 111)
FI	.765	.881	.798	.788	---	.890	.757
FII	.494	.618	.328	.407	---	.630	.474
Total Score	.808	.885	.792	.798	---	.890	.766

Total = Total score; FI = Personal competence; FII = Acceptance of life and oneself

The reliability levels shown for the total scale and Factor I are satisfactory (Nunnally, 1978), as they exceed the value of .70. However, following the trend of previous studies, factor 2 obtains lower levels of reliability ($\alpha = .474$).

If the values obtained in the present study are compared with the previous, the values obtained in the total resilience score are similar to those obtained in the third (Ruiz-Barquín et al. 2013) and fourth study (Ruiz-Barquín et al. 2015a), and significantly lower than the other studies considered.

As regards Factor I, there were very similar values to the study with footballers (Ruiz et al. 2012), the third study (Ruiz-Barquín et al. 2013) and fourth study (Ruiz-Barquín et al. the rest of studies being quite inferior.

Finally, as for Factor II, mean values are shown with respect to the rest of studies, being mainly in line with the study of Footballers (Ruiz et al. 2012) and Athletics coaches (Ruiz-Barquín et al. 2015b).

Items with the highest correlational values item-total scale are items 9,10, 12, 14, 16 and 17, with the lowest being those items in 5, 11, 20 and 22.

Regarding Cronbach's alpha coefficient, the simple removal of item 20 would increase the reliability of the scale above .80 ($\alpha = .805$).

In spite of these considerations, the general reliability of the questionnaire maintains stable levels of reliability despite the removal of a particular item.

Table 8. Analysis of the reliability level of the Resilience scale items.

	Average of scale if item is removed	Variance of scale if item is removed	Corrected Item -total correlation	Cronbach's alpha if item is removed
Item 1	135.96	118.290	.346	.757
Item 2	135.66	121.027	.321	.759
Item 3	136.79	117.093	.293	.759
Item 4	135.43	118.120	.424	.754
Item 5	135.72	121.949	.179	.765
Item 6	135.41	118.609	.428	.754
Item 7	135.98	117.454	.355	.756
Item 8	136.01	113.227	.456	.749
Item 9	136.38	112.037	.510	.745
Item 10	136.05	111.625	.558	.743
Item 11	139.01	122.009	.047	.783
Item 12	136.52	111.124	.557	.742
Item 13	136.09	115.283	.462	.750
Item 14	135.89	113.497	.503	.747
Item15	135.66	114.609	.615	.745
Item16	135.71	119.152	.328	.758
Item 17	135.77	115.303	.558	.747
Item 18	135.51	119.343	.368	.757
Item 19	136.50	119.089	.229	.763
Item 20	137.87	133.457	-.238	.805
Item 21	135.32	120.672	.315	.759
Item 22	137.90	125.199	-.038	.791
Item 23	135.86	118.761	.346	.757
Item 24	135.42	118.701	.488	.753
Item 25	136.32	116.600	.260	.762

Discussion

Considering the first and second objective of the present study, the resilience scale used has allowed us to accurately describe the resilience levels of the sample obtained. Likewise, mean differences analysis considering the two factors, the total resilience score and the personal and sport variables included, show us the absence of statistically significant differences. This result could be due in part to the fact that both Paddle coaches who carry out their professional activity with people with intellectual disabilities who practice Paddle, and those Paddle coaches who decide to train as Adapted Paddle coaches, have a similar personality profile, with one personality characteristic being Resilience itself.

On the other hand, the significance trend where more experienced coaches would have somewhat higher resilience levels should be studied in greater depth in future studies: One possibility is that studies should be performed with a greater sample number to more accurately determine the presence or absence of differences; the other is that we must revise through new theoretical, statistical or empirical criteria the cut-off points in years of experience (García-Naveira & Ruiz-Barquín, 2013) for the establishment of the different comparison groups. These considerations make sense when in the results of the third aim of the present study there are small but significant correlations between years of experience and Resilience levels, which may indicate a modulating role for the years of experience in the expression of Resilience-related behaviours. Given the characteristics of the instrument used, some results obtained should be taken with caution, since the reliability levels of factor II (acceptance of life and oneself), have lower reliability than factor I (Personal Competence) and the total scale score.

In addition, the absence of statistically significant differences according to the sex and age variables, are in the same line of results obtained in previous studies with samples of athletes (De la Vega et al. 2012a, Ruiz-Barquín et al. 2013). These results could imply that Resilience is constituted as "a basic personality characteristic in the adaptation of the individual to their environment" (Ruiz-Barquín et al. 2013), which could explain to some extent the low influence of the sex and age variables in the resilience levels of the studied athletes and coaches.

Regarding the fourth objective, the results show how Adapted Paddle coaches present high scores and a high percentage of coaches with high resilience when compared with previous national studies (De la Vega et al. 2012a; García et al. Ruiz et al. 2013, Ruiz-Barquín, et al. 2015b). Likewise, values significantly higher than other athletes are obtained, showing similar values with Athletics trainers (Ruiz et al. 2015b).

In the search for the greatest possible practical usefulness of results obtained in the present study, the use of Adapted Paddle coach resilience scales allows us to show the high resilience levels of this sample being able to observe how the centiles obtained by previous studies are located with the scales used (all between centiles 4 and 45).

Regarding the fifth aim of the study, reliability levels of the scale show similar values to previous studies, obtaining values higher than .70 (Nunnally, 1978) in Factor I and in the total score of the Resilience scale. At the same time, it is important to highlight how the simple removal of item 20 would substantially increase the reliability levels of the total scale (from .766 to .805), which together with obtaining progressively low reliability levels in the second factor (Vigário et al. 2009), means it could be advisable to review the factorial structure of the scale for further studies.

Although in most studies the reliability levels of factor II are low, in some cases moderate values are obtained (De la Vega et al. 2012a). This tendency to find reduced reliability levels should be kept in mind for subsequent studies. One possibility is through the analysis of item content since, apart from the recommended factorial revisions, it is likely that there is a predominance of items referred mainly to the "Personal Competence" factor (related to the perception of self-efficacy and estimation of one's own cognitive, behavioral or emotional capacities to overcome adversity), and a smaller number of items referring to aspects more related to "Acceptance of oneself and of life" (referring to the adequate perception of the processes of change in life itself and in the physical, emotional and social environment surrounding the individual that could potentially help them toward acceptance and interpretation of certain facts, being able to have a greater capacity for change and a greater adjustment between the individual and their environment). Therefore, it is likely that the adaptation of the questionnaire used (Ruiz et al. 2012), or the generation and design of new questionnaires where the number of items is increased, would not only compensate for possible deficiencies in factor II, but also have a greater number of indicators (items) for the evaluation of a personality construct with a high level of generality.

Therefore, the high Resilience levels found with Adapted Paddle coaches could be due in part to the fact that working with people with disabilities would demand an important degree of dedication and involvement with this group. As González-Mohino (2007) points out, resilience in professionals working with disabled people favours the presence of important aspects such as empathy and the search for positive aspects within the limitations of the subjects. This is an important aspect as the view of disability remains more focused on the limitations of people rather than on their potential (Rocha & Gonsálvez, 2014). These results also imply justifying the importance of applying studies on resilience to the context of adapted sport. From this perspective, Resilience could be a desirable and relevant feature to consider in the selection processes of sports coaches who could dedicate themselves partially or totally to sports activities in persons with disabilities. Intervention inadapted sport requires the adaptive capacity of the professionals taking part with new research being necessary on the different agents involved (De la Vega, 2016).

Considering the results obtained both in present and prior studies, it would be advisable to carry out research in the context of physical activity and sport, where the Resilience construct was analysed from a "multi-method" perspective and not only considering the questionnaire as an evaluation measure, as in other contexts such as mental health (Belo, 2011), the business environment (Balreira, 2013) or education (Romero & April, 2015). The combination of the questionnaire with observational methodologies, in-depth interviews, competence or performance tests related to personal skills (among others, communication, leadership, decision making and problem solving) and outcome variables (among others, adherence of persons with disabilities to Adapted Paddle training programs, maintenance of level of and response capacity of the Adapted Paddle coach under conditions of adversity and stress, ability to tolerate possible professional exhaustion, etc.), could provide relevant information to carrying out training programs and more specific and effective psychological intervention.

It would also be advisable to do longitudinal studies and other psychological personality and psychology variables that allow studying the construct of Resilience from a more global and dynamic perspective, and with greater ecological validity.

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Annex I

Adapted personal data of the interview for coaches Ruiz (2004) and Ruiz-Barquin et al. (2015b).

Below, are a series of personal data and data for a coach. It may be the case that you have been coaching other sports, but unless stated, please reply according to your specific sporting activity .
(by devotion, by the level of athlete or years of experience).

1.-Age: ___
2 Sex (Male; Female): ___
3 Sport you coach (main): ___
If you are or have been another sports trainer, indicate what type: _____
4-Dedication to the main sport as a coach (mark an "x"): Total □ Partial □
5.-How many hours a week do you coach? ___hours.
6- Years of experience as coach of main sport.____years
Years of experience as a trainer in other sports. _____
7.-Age at which you started to be coach of the main sport ___ years
8. Currently, Do you coach in one or several sports clubs? (mark an "x")
One □ Several □
9. Type of club or sport centre where you work as a coach (mark an "x"):
□ Public □ Private □ Both
10. Do you coach of Adapted Paddle to athletes with disabilities?
(mark an "X"): Yes □ Not □
If Yes, indicate what kind of disability work (mark with an "X"; you can choose
more than one):
□ Intellectual disability □ Motor Disability □ Sensory disability
□ Other types of disability: ___
10 Fitness level of the athletes that you train
□ Recreational □ Federated □ High-performance □ Professional
In case of Adapted Paddle coach, indicate level:
□ Recreational □Federated □High-performance
11-Have you been an athlete? Yes □No □
If so, indicate in which sport and at what level
Sport 1. _
□ Recreational □Federated □High-performance □Professional
Sport 2. _
□ Recreational □Federated □High-performance □Professional
Others 3. _
□ Recreational □Federated □High-performance □Professional
12.-Are you still competing as an athlete? Yes□ No □
If so, in what sport? _ at what level? (mark an "x").
□ Recreative □Federated □High-performance □Professional
13.-What level of study do you possess? (mark an "x")
□ Primary
□ Secondary (ESO, FP)_____
□ University (specify) __
□ Others_____
14 Main Sport Sports degree (indicate which and level): _
□ Level I (monitor-instructor) □Level II (regional trainer) □Level III (national coach)
15.-Do you possess any other sports-related research? (mark an "x") Yes □ No □
If Yes, indicate what (TAFAD, teaching physical education, INEF or CAFD, other sports training).
1.- _____
2.- _____

3.- _____
4.- Others:_____
16. Do you have any other occupation besides trainer? Indicate what, and how many hours weekly?
Activity: _:_ hours.
17 Indicate maximum results obtained as coach (Position, Championship and approximate year).
1.-_____
2.- _____
3.- _____
18.-in case of having been an athlete, indicate the maximum results obtained (position and)
(Championship and approximate year).
1.-_____
2.- _____
3.- _____

Annex II.

Scales of the total scoring of Resilience for Adapted paddle and paddle coaches

Percentiles	Factor I	Factor II	Total resilience
1	74.4800	28.3600	111.1200
2	78.2400	31.2400	112.7200
3	79.7200	32.3600	115.3600
4	81.9600	33.0000	119.3600
5	85.4000	33.6000	123.0000
10	89.2000	36.0000	128.0000
15	91.0000	37.0000	130.0000
20	94.0000	38.0000	132.0000
25	95.0000	39.0000	133.0000
30	96.0000	39.6000	135.0000
35	96.0000	40.0000	137.0000
40	98.0000	40.8000	139.8000
45	98.4000	41.4000	141.4000
50	101.0000	42.0000	143.0000
55	101.0000	43.0000	145.0000
60	102.2000	44.0000	146.2000
65	103.0000	44.0000	147.8000
70	104.0000	45.0000	149.0000
75	107.0000	46.0000	150.0000
80	107.6000	47.0000	152.0000
85	109.0000	47.0000	154.0000
90	110.0000	48.8000	156.0000
95	111.8000	50.0000	160.0000
96	113.0000	50.0000	160.0000
97	113.0000	51.2800	160.0000
98	113.0000	52.0000	162.2800
99	113.8800	53.7600	163.8800