PODIUM
Journal of Science and Technology in Physical Culture

UNIVERSITY EDITORIAL

Volumen 17
Issue 1

2022

University of Pinar del Río "Hermanos Saíz Montes de Oca"

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ISSN: 1996–2452 RNPS: 2148
PODIUM Journal, January-April 2022; 17(1):240-257

UNIVERSIDAD DE PINAR DEL RÍO
HERMANOS SAÍZ MONTES DE OCA

PODIUM
REVISTA DE CIENCIA Y TECNOLOGÍA
EN LA CULTURA FÍSICA

Translated from the original in spanish

Original article

Specialists' validation to aerobic endurance exercises group for soccer's category U-14

Validación por especialistas a grupo de ejercicios de resistencia aeróbica para futbolistas Categoría Sub-14

Validação por especialistas de um grupo de exercícios de resistência aeróbica para jogadores de futebol sub-14

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Received:08/29/2021.
Approved:10/02/2022.

How to cite ítem: Almeida Farinango, E. (2022). Specialists validation to aerobic resistance exercises group for soccer's category U-14/Validación por especialistas a grupo de ejercicios de resistencia aeróbica para futbolistas Categoría Sub-14. *PODIUM - Journal of Science and Technology in Physical Culture, 17*(1), 240-257. Retrieved from https://podium.upr.edu.cu/index.php/podium/article/view/1179

ABSTRACT

Aerobic endurance in soccer is considered a determining capacity, for which its enhancement is an indispensable part of the content of sports training, being useful to design specialized models for its improvement, which must first be submitted to theoretical validation. In this sense, the objective of the research is to theoretically validate, through national and foreign experts, a proposal on a group of exercises to develop aerobic endurance in soccer players of the U-14 category. The research is descriptive-explanatory of correlational order, an intervention proposal is validated with a group of aerobic endurance exercises for U-14 soccer players in two moments of the design. Five evaluative indicators were consulted to 25 specialists (Nationals: 14, Foreigners: 11), and the future intervention proposal was theoretically validated.

Between independent groups, there were no significantly different evaluations in any of the indicators5. Between related groups, significant differences in favor of the posttest were evidenced, both in the national specialists (Comprehensiveness: r=0.001; Affordability: r=0.002; Progression: p=0.001; Variety: p=0.001; Progressive Specialization: p=0.001), and in the foreign specialists (Comprehensiveness: r=0.006; Affordability: r=0.004; Progression: p=0.002; Variety: p=0.003; Progressive Specialization: p=0.004). The future intervention proposal presented adequate Comprehensiveness, Affordability, Progression, Variety and Progressive Specialization, significantly improving the evaluations of the proposal in its second moment of design. On the other hand, there is an adequate degree of agreement regardless of the theoretical and methodological conceptions of each independent group, an additional value of the proposal presented by the author.

Keywords: Aerobic endurance; U-14 soccer; Validation by specialist.

RESUMO

A resistência aeróbica no futebol é considerada uma capacidade determinante, para a qual a sua valorização é uma parte indispensável do conteúdo da preparação desportiva, sendo útil para conceber modelos especializados para o seu aperfeiçoamento, os quais devem ser submetidos, em primeira instância, a uma validação teórica. Neste sentido, o objectivo da investigação é validar teoricamente, através de peritos nacionais e estrangeiros, uma proposta de um grupo de exercícios para desenvolver a resistência aeróbica em jogadores de futebol da categoria sub-14. A investigação é descritiva-explicativa de ordem correlacional, uma proposta de intervenção é validada com um grupo de exercícios de resistência aeróbica para jogadores de futebol sub-14 em dois momentos da concepção. Cinco indicadores de avaliação foram consultados com 25 especialistas (Nacionais: 14, Estrangeiros: 11), e a futura proposta de intervenção foi teoricamente validada. Entre grupos independentes, não houve avaliações significativamente diferentes em nenhum dos 5 indicadores. Entre grupos relacionados, foram evidenciadas diferenças significativas a favor do pós-teste, tanto nos especialistas nacionais (Compreensibilidade: r=0,001; Acessibilidade de preços: r=0,002; Progressão: p=0,001; Variedade: p=0,001; Especialização Progressiva: p=0,001), como nos especialistas estrangeiros (Compreensibilidade: r=0,006; Acessibilidade de preços: r=0,004; Progressão: p=0,002; Variedade: p=0,003; Especialização Progressiva: p=0,004). A futura proposta de intervenção apresentou uma Compreensibilidade, Acessibilidade, Progressão, Variedade e Especialização Progressiva adequadas, melhorando significativamente as avaliações da proposta no seu segundo momento de concepção. Por outro lado, existe um grau de acordo adequado independentemente das concepções teóricas e metodológicas de cada grupo independente, um valor adicional da proposta apresentada pelo autor.

Palavras-chave: Resistência aeróbica; Futebol U-14; Validação por especialistas.

INTRODUCTION

Sports training is a complex and specialized pedagogical process that requires an comprehensive scientific direction of each of components of the teaching-learning process in order to obtain sports results (Romero-Frometa, 2000).

Soccer is a sports discipline framed among team sports, which historically has been making inroads in all parts of the world with increasing popularity, carried out massively by various age groups, ethnic groups and both genders, which participate in various local, continental and global competitions, both at recreational and high performance levels (Müller & García Jerez, 2013).

The practice of sports at an early age is of great importance for the physical, social, cognitive and affective development of children (Calero-Morales S., 2019), since all these components are stimulated through sports and motor games, so it lies in studying the physical and anthropometric qualities of this sport (Murillo Lara & Tapias Medrano, 2014; Cometti, 2007; Romero Mackenzie, 2021; Torres, Coca, Morales, García, & Cevallos, 2015; Weineck, 2019).

In soccer, certain movements are applied according to the game actions (López, Bernal, Wanceulen, & Wanceulen, 2007; Olivare, López, & Moreno, 2011), it is a sport in which actions with intermittent and discontinuous characteristics occur, (Luque, Sánchez, & Sánchez, 2013) for which the characterization of the sport and together with variables such as age range compliments the design of the content of specialized sports preparation (Borzi, 1999; Brüggemann, 2004; Calero, 2019; Morales. S., 2018; Wein, 1996).

Following the criteria of some authors, training in youth divisions starts from a purely analytical method, with situations focused on technical work totally isolated from the reality of the game and physical work without and with the ball, (Rivera, Echeverri, & Garcia, 2020), where the main objectives are sought to improve physical endurance as a determining capacity in the sport in the short, medium or long term (Cometti, 2007; Cruz, *et al.,* 2017; López Revelo & Cuaspa Burgos, 2018; Sánchez-Cañas, Reyes, Stalin, & Casabella, 2017).

For Arroyo, Cruz, & Estupiñán (2019), the demands of modern soccer force the development of increasingly technical soccer players, but for this it is necessary that the athlete has an adequate development of his physical capacities, (Arroyo, Cruz, & Estupiñan, 2019) which allows him to perform competitive activities with greater effectiveness in the actions, both offensive and defensive, even when the onset of fatigue begins.

Endurance is the capacity to psychically and physically resist a load for a long time (Morales & Gonzalez, 2015), that is, they raise as a common denominator the idea of prolonging the effort for a considerable period of time (Palacio & Trujillo, 2013). Endurance is considered one of the most important physical capacities, so much so that it is the last one we lose and it is also true that its development depends greatly on the strength that an individual has, however, when starting any type of training, it becomes necessary to create an aerobic -anaerobic base in the athlete's organism and this is only possible thanks to the development and implementation of various techniques and optimal training methods (Mallo, 2014; Carrillo Aguagallo, *et al.,* 2018; Romero-Frometa, 2000; de Paz Alcolado & Calzado, 2004; Calero-Morales, *et al.,* 2017).

In the field of sports, the development of endurance allows delaying the onset of fatigue during competition, increasing the capacity to withstand the workloads of training, improving the capacity to recover between efforts and stabilizing sports technique. The improvement of aerobic endurance allows a faster restoration of phosphocreatine and ATP concentrations during rest periods (Palacio & Trujillo, 2013; Vásquez, Riquetti, & Morales, 2017).

Soccer is a sport that involves intermittent actions such as jumping, shooting or dribbling, aerobic efforts predominate (70-85 % of the total), with aerobic endurance and maximum oxygen consumption (VO_2máx) being fundamental pillars for performance in its practice (Piqueras, Malavés, & López, 2010). Maximal aerobic capacity is considered a key factor in modern soccer. In fact, a high VO_2máx value allows the player to cover long distances on the field of play (Martínez & Trujillo, 2018). Therefore, Nicolás López, López Sánchez, Borrego Balsalobre, Díaz Suarez, & Smith, 2020 confirm the possibility of training this variable from very early ages, based on the capacity to perform prolonged efforts and the best $VOmax_2$ ratio is reached between 14 and 17 years of age in the case of boys.

However, it is not clear the extent of the importance of the exercises for the development and improvement of aerobic endurance in U-14 soccer players, an idea that could determine the priority of aerobic endurance training in the sports training models of Ecuadorian soccer players in the formative categories, an aspect that could show some needs for improvement of the national professional specialized in soccer.

Based on the above, the importance of endurance as a fundamental capacity for performance in soccer is demonstrated, the results of this research will benefit soccer players of the U-14 category, as well as contribute to the coaches of the initiation categories with a research that will serve as methodological support to improve the component of physical preparation studied. Likewise, the research is feasible, since it does not require large human and economic resources for its implementation, since the proposal is based on a descriptive, explanatory and correlational type of research, where questionnaires will be applied online to national and international specialists.

In this sense, the first step of the research is to validate theoretically, through national and foreign experts, a proposal for a group of exercises to develop aerobic endurance in U-14 soccer players.

MATERIALS AND METHODS

In order to develop the research, a descriptive and bibliographic review approach was used on the training of endurance in soccer players of formative categories, characteristics, regularities and tendencies were determined and, very specifically, in the applicability in soccer players of formative categories. This process allowed to consider important generalities on the subject.

In addition, the Mapping and Index methods were used, the purpose of which is to investigate, collect, organize, analyze and interpret information or data on a given topic. In addition, the criteria of the specialists were correlated to determine the existence or not of differences in their criteria; therefore, the research had a descriptive-explanatory approach of correlational order.

The methodological steps applied in the research were as follows:

1. Determine the importance of aerobic endurance training in soccer.

2. Delimit as a first step, at least 4 exercises that develop the aerobic endurance of the soccer player, according to the primary sources of the research.

3. Evaluate aerobic endurance exercises eliminated or added through specialist consultation.

4. Collection of recommendations, strengths, correction of errors and possible improvements, increasing the aerobic endurance work exercises by at least 7.

5. Describe and compare the results obtained by the two independent groups of specialists consulted, arriving at conclusions of interest to the researcher.

Twenty-five specialists divided into two independent groups were used for the analysis, being group 1 of national specialists (14 subjects) and group 2 of foreign specialists (11 subjects). They were evaluated through a five-level Likert scale (1: Very Low; 2: Low; 3: Medium; 4: High; 5: Very High) and the evaluative scale was applied to 5 analysis indicators delimited by Rojas (2021), adapted and described below:

1. Comprehensiveness (I): That the content of the athlete's preparation includes various elements of aerobic training in an integrated manner, complying with the principle of multilateralism.

2. Affordability (A): That the content of the preparation of the athlete is designed to effectively meet the objectives of the training applied, according to the category of study, complying with the principle of affordability.

3. Progression (P): That the content of the preparation of the athlete can be classified by groups of increasing complexity, being able to comply with the principle of progression of sports training.

4. Variety (V): That the content of the preparation of the athlete is varied, allowing to adapt them to the individualities of each player, fulfilling the principle of general multilateralism.

5. Progressive Specialization (EP): That the content of the preparation of the athlete has a consecutive complexity, allowing to gradually adapt to the principle of sport specialization.

For the selection of the specialists, three inclusion criteria were considered: first, to have professional experience of at least ten years as a coach and/or physical trainer in formative soccer; second, to present a third level certificate in Physical Culture, Physical Activity and Sports or similar; third, to present in his or her curriculum outstanding places in national championships that justify the level of knowledge of the professional surveyed.

The exercises designed as a final proposal consist of seven basic stimuli that include microstructured models (containing the physical, technical, tactical and psychological parts) and analytical models (containing intermittent metabolic stimuli) based on the improvement of aerobic capacity adapted for U-14 soccer players.

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For the tabulation of the data, Microsoft Excel 2019 was used and for the statistical analysis, SPSS v25, determining the non-existence of a normal distribution of the data and implementing, moreover, the nonparametric correlational Mann-Whitney U test for two independent samples ($p \leq 0.05$), which allows the comparison of the ratings between independent groups and evidences the concordance in the criteria issued by groups with theoretical and methodological bases in the conception of the training of the aerobic capacity of the soccer player, supposedly different. On the other hand, the Wilcoxon Signed Ranks Test ($r \leq 0.05$) will be applied, establishing the existence or not of significant differences in the judgments issued by each independent group and the scores achieved in the first (Pretest) and second intervention proposal (Posttest) are compared.

RESULTS AND DISCUSSION

Tables 1 and 3 show the results obtained by means of a survey, when the specialists evaluated the content of the preparation of the U-14 soccer athlete for the enhancement of aerobic capacity. This content, which in its initial version (Table 1) was subjected to criticism by the specialists, improved the design and was presented in its second evaluation as part of Table 2, which in its final version had seven specialized exercises, as briefly described in the *Material and Methods* section.

Table 1. - Evaluation of the content of the athlete's preparation to enhance aerobic capacity in U-14 soccer. Pretest

No	I		A		P		V		EP	
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2
1	1	2	2	2	2	1	1	1	1	1
2	2	3	3	3	2	2	2	1	1	2
3	1	3	3	2	2	1	1	2	1	1
4	2	2	2	3	1	2	1	1	2	1
5	2	2	3	4	1	1	1	1	1	1
6	2	2	2	3	2	2	2	1	2	1
7	1	2	3	3	2	2	1	1	1	1
8	2	2	3	3	1	2	1	1	1	1
9	2	2	3	3	2	1	2	1	1	1
10	2	2	2	3	2	1	1	2	2	1
11	1	2	3	2	2	2	1	1	1	1
12	1		3		1		2		1	
13	1		4		1		1		1	
14	2	1	2		2	1	1	1	1	1
	1,6	**2,1**	**2,7**	**2,8**	**1,6**	**1,5**	**1,3**	**1,2**	**1,2**	**1,1**

Table 1 shows the data collected from the initial evaluation or pretest carried out by national and foreign specialists in the five indicators that analyze the content of the preparation of the U-14 soccer athlete for the enhancement of aerobic capacity, where it is specified that the mean scores for most of the indicators obtained a score of less than 2 (between Very Low and Low).

In the case of the Comprehensiveness indicator (I), the mean score obtained as part of the pretest that evaluates the intervention proposal is 1.6 points (between Very Low to Low) for the national specialists (Group 1), while the foreign specialists rate it with a mean score of 2.1 points (Low), with significant differences (p=0.025) in favor of Group 2, as shown in table 2 from the Mann-Whitney U test.025), indicating that foreign specialists give a better rating to the indicator as part of the analysis of the initial intervention proposal of four aerobic preparation exercises for U-14 soccer.

In the case of the Affordability indicator (A), the initial mean score established by Group 1 obtained a mean of 2.7 points (between Low and Medium), being the highest score given by that group in an indicator as part of the pretest, while Group 2 established a mean score of 2.8 points, also being the highest score established by that group in all the analysis indicators as part of table 1. However, the comparison of the score between independent groups did not establish significant differences (p=0.727), as shown in Table 2, indicating that both groups consider that the level of Affordability of the initial intervention proposal should be improved as well as the rest of the indicators analyzed.

In the case of the Progression (P) indicator, the mean score given by Group 1 was 1.6 points (between Low to Medium), being lower than the mean score given by Group 2 (1.5 points), there are no significant differences (p=0.629). Therefore, the content of the preparation of the athlete should improve the classification by groups of increasing complexity, fulfilling in a better way the principle of progression of the sports training, aspect evidenced as part of table 4.

In the case of the Variety indicator (V), the initial score given by the group of national specialists was established at 1.3 points (Group 1: Very Low), while group 2 of foreign specialists gave an average score of 1.2 points (Very Low), with no significant differences (Table 2: p=0.687), indicating that the variety of the contents of the preparation of the athlete should be increased. Aspect completed in the present research and analyzed as part of table 4.

The last indicator analyzed (Progressive Specialization) presented an average score of 1.2 points (Very Low) as part of the analysis issued by national specialists, while foreign specialists gave an average score of 1.1 points (Very Low), there being no significant differences (p=0.609) and, therefore, it was demonstrated the need for the content of the preparation of the athlete to have a better consecutivity in its complexity, which does not allow the principle of sports specialization to be correctly fulfilled (Table 2), (Table 3) and (Table 4).

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Table 2. - Nonparametric Mann-Whitney U test. Pretest

Ranges				
	Group	N	Average rango	Sum of ranks
Comprehensiveness	Group1	14	10,07	141,00
	Group2	11	16,73	184,00
	Total	25		
Affordability	Group1	14	12,50	175,00
	Group2	11	13,64	150,00
	Total	25		
Progression	Group1	14	13,54	189,50
	Group2	11	12,32	135,50
	Total	25		
Variety	Group1	14	13,57	190,00
	Group2	11	12,27	135,00
	Total	25		
Progressive Specialization	Group1	14	13,68	191,50
	Group2	11	12,14	133,50
	Total	25		

Table 3. - Test statistics

	Comprehensiveness	Affordability	Progression	Variety	Progressive Specialization
Mann-Whitney U	36,000	70,000	69,500	69,000	67,500
W for Wilcoxon	141,000	175,000	135,500	135,000	133,500
Z	-2,737	-,442	-,483	-,592	-,818
Asymptotic sign(bilateral)	,006	,659	,629	,554	,413
Exact significance [2*(sig. one-sided)].	,025b	,727b	,687b	,687b	,609b

a. Grouping variable: Group
b. Not corrected for ties.

Table 4. - Evaluation of the content of the athlete's preparation to enhance aerobic capacity in U-14 soccer. Post test

No	I		A		P		V		EP	
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2
1	3	2	4	4	4	3	2	3	2	3
2	3	3	4	4	3	4	4	4	2	2
3	4	4	5	5	3	3	3	4	3	3
4	3	4	4	4	4	3	4	3	3	4
5	4	4	4	4	3	4	3	3	3	2
6	3	4	5	5	4	4	3	3	3	3
7	4	3	4	4	3	3	2	3	2	3
8	3	3	4	4	3	3	3	4	3	3
9	3	4	4	4	3	3	3	3	3	2
10	3	3	4	4	3	3	3	3	3	3
11	4	3	4	4	3	4	3	2	2	3
12	2		3		3		4		3	
13	4		4		3		3		3	
14	4		3		4		3		3	
	3,4	**3,4**	**4,0**	**4,2**	**3,3**	**3,4**	**3,1**	**3,2**	**2,7**	**2,8**

Table 4 evidences the results issued by the national and foreign specialists to the second intervention proposal designed by the author of the research, showing higher means than those presented as part of the pretest (Table 1), where the mean score as part of indicator "I" was set at 3.4 points (Medium), which is the same score that the foreign specialists emitted (3.4 points: Medium level), therefore, there were no significant differences in the scores emitted by both independent groups (p=0.979), as shown in table 5 (Table 5).

The above analysis showed improvements in the second intervention proposal, after completing the methodological step number four available in the "Methods" section, related to the collection of recommendations, determination of strengths, correction of errors and possible improvements, increasing the aerobic endurance work in at least 7 models of specialized exercises. Comprehensiveness manifests itself as an essential factor when designing the content of the preparation of the athlete, represented by the principle of multilateralism, indispensable in the stages of sports training (Zeeb, 2012).

In the case of the Affordability indicator, the post-test showed notable improvements in the score obtained, with a mean of 4.0 points (Group 1: High) and 4.2 points (Group 2: High), with no significant differences between groups (p=0.536), indicating that both independent groups gave a considerably higher score than in the pre-test (Table 1).536),

indicating that both independent groups gave a considerably higher score than the one issued in the pretest (Table 1), where the second intervention proposal is considerably higher when comparing the scores issued by each group of specialists separately, as evidenced by the statistics in table 5, described and analyzed in the table in subsequent paragraphs. The principle of Affordability is of utmost importance in sports preparation, (Morales. S., 2018; Calero, 2019; Morales. S., 2014) which allows the adequate assimilation of physical loads.

In the case of the Progression indicator, the scores were also higher than those established in the initial proposal (Table 1), reaching a mean in the posttest as part of group 1 of 3.3 points (Medium) and a mean in the posttest as part of group 2 of 3.1 points (Medium), with no significant differences (p=0.767), indicating that both independent groups did not evaluate the second intervention proposal very differently, requiring agreement among the specialists consulted.

In the case of the Variety indicator, once the number of specialized exercises was increased as part of the post-test, the rating by both independent groups of specialists improved, reaching an average score by group 1 of 3.1 points (Medium) and a score by group 2 of 3.2 points (Medium), there are no significant differences between the scores issued by both independent groups (p=0.727), indicating the existence of agreement between the two groups.2 points (Medium), there are no significant differences between the scores issued by both independent groups (p=0.727), indicative of the existence of concordance between evaluators and indicative of a remarkable improvement when comparing both scores issued in the pretest and posttest. Variety in the physical load allows a better stimulation of the osseo-muscular system, represented by the application of a large number of training programs (Benedek. & Pálfai, 1999), and, therefore, a better bioadaptation, which leads to better supercompensations.

For the Progressive Specialization indicator, the mean scores were also higher compared to the pretest (Table 1), reaching a mean score of 2.7 points for group 1 (between Low and Medium) and a mean score of 2.8 points for group 2 (between Low and Medium), with no significant differences (p=0.767).

Table 5. - Nonparametric Mann-Whitney U test. Posttest

Ranges				
	Group	N	Average range	Sum of ranks
Comprehensiveness	Group1	14	12,93	181,00
	Group2	11	13,09	144,00
	Total	25		
Affordability	Group1	14	12,14	170,00
	Group2	11	14,09	155,00
	Total	25		
Progression	Group1	14	12,57	176,00
	Group2	11	13,55	149,00
	Total	25		
Variety	Group1	14	12,50	175,00
	Group2	11	13,64	150,00
	Total	25		
Progressive Specialization	Group1	14	12,57	176,00
	Group2	11	13,55	149,00
	Total	25		

Tabla 6. - Estadísticos de prueba[a]

	Comprehensiveness	Affordability	Progression	Variety	Progressive Specialization
Mann-Whitney U	76,000	65,000	71,000	70,000	71,000
W for Wilcoxon	181,000	170,000	176,000	175,000	176,000
Z	-,061	-,880	-,406	-,451	-,403
Asymptotic sign(bilateral)	,951	,379	,685	,652	,687
Exact significance [2*(sig. one-sided)].	,979b	,536b	,767b	,727b	,767b

a. Grouping variable: Group
b. Not corrected for ties.

Table 7 and 9 show the correlations for two related samples from the Wilcoxon Signed Ranks Test, comparing the evaluations of each group in the two tests performed (Table 7), (Table 8) and (Table 9).

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Table 7. - Nonparametric test Wilcoxon Signed Ranks. Group 1

Ranges				
		N	Average range	Sum of ranks
PosttestI - PretestI	Negative ranges	0[a]	,00	,00
	Positive ranges	14[b]	7,50	105,00
	Ties	0[c]		
	Total	14		
Posttest - Pretest	Negative ranges	0[d]	,00	,00
	Positive ranges	12[e]	6,50	78,00
	Ties	2[f]		
	Total	14		
PosttestP - PretestP	Negative ranges	0[g]	,00	,00
	Positive ranges	14[h]	7,50	105,00
	Ties	0[i]		
	Total	14		
PostestV - PretestV	Negative ranges	0[j]	,00	,00
	Positive ranges	14[k]	7,50	105,00
	Ties	0[l]		
	Total	14		
PostestEP - PretestEP	Negative ranges	0[m]	,00	,00
	Positive ranges	14[n]	7,50	105,00
	Ties	0[o]		
	Total	14		

a. PosttestI< PretestI, b. PosttestI> PretestI, c. PosttestI = PretestI, d. Posttest< PretestA< PretestA, e. Posttest> Pretest, f. PosttestA = PretestA, g. PosttestP< PretestP, h. PosttestP> PretestP, i. PosttestP = PretestP, j. PosttestV< PretestV, k. PostestV> PretestV, l. PostestV = PretestV, m. PostestEP< PretestEP, n. PostestEP> PretestEP, o. PostestEP = PretestEP

Table 8. - Test statistics[a]

	PosttestI - PretestI	Posttest - Pretest	PosttestP - PretestP	PostestV - PretestV	PostestEP - PretestEP
Z	-3,354[b]	-3,140[b]	-3,372[b]	-3,407[b]	-3,391[b]
Asymptotic sign(bilateral)	,001	,002	,001	,001	,001

a. Wilcoxon signed-rank test.
b. It is based on negative ranges.

Table 7 shows significant differences in all cases in the evaluations made by the group of national specialists, where the Comprehensiveness indicator shows a notable improvement in favor of the posttest (r=0.001), given the existence of a higher average rank (7.50) with 14 positive ranks out of a possible 14, that is, all the national evaluators gave a better grade to the second intervention proposal designed by the author, once the improvements and recommendations issued by the specialists were incorporated. On the other hand, the Affordability indicator also showed significant differences in favor of the posttest (r=0.002), as did the Progression indicator (r=0.001), the Variety indicator (r=0.001) and the Progressive Specialization indicator (r=0.001).

In the case of table 9, the significant differences in the evaluations issued by the foreign specialists belonging to group 2 are specified. In all cases, significant differences in favor of the post-test are established, indicating that these specialists valued the contributions of the intervention proposal that improved in its second design, both in the Comprehensiveness indicator (r=0.006), the Affordability indicator (r=0.004), the Progressiveness indicator (r=0.002), the Variety indicator (r=0.003) and the Progessive Specialization indicator (r=0.003).006), the Affordability indicator (r=0.004), the Progression indicator (r=0.002), the Variety indicator (r=0.003) and the Progressive Specialization indicator (r=0.004) (Table 10).

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Table 9. - Nonparametric test Wilcoxon Signed Ranks. Group 2

Ranges				
		N	Average range	Sum of ranks
PosttestI - PretestI	Negative ranges	0[a]	,00	,00
	Positive ranges	9[b]	5,00	45,00
	Ties	2[c]		
	Total	11		
Posttest - Pretest	Negative ranges	0[d]	,00	,00
	Positive ranges	10[e]	5,50	55,00
	Ties	1[f]		
	Total	11		
PosttestP - PretestP	Negative ranges	0[g]	,00	,00
	Positive ranges	11[h]	6,00	66,00
	Ties	0[i]		
	Total	11		
PostestV - PretestV	Negative ranges	0[j]	,00	,00
	Positive ranges	11[k]	6,00	66,00
	Ties	0[l]		
	Total	11		
PostestEP - PretestEP	Negative ranges	0[m]	,00	,00
	Positive ranges	10[n]	5,50	55,00
	Ties	1[o]		
	Total	11		

a. PosttestI< PretestI, b. PosttestI> PretestI, c. PosttestI = PretestI, d. Posttest< PretestA< PretestA, e. Posttest> Pretest, f. PosttestA = PretestA, g. PosttestP< PretestP, h. PosttestP> PretestP, i. PosttestP = PretestP, j. PosttestV< PretestV, k. PostestV> PretestV, l. PostestV = PretestV, m. PostestEP< PretestEP, . PostestEP> PretestEP, o. PostestEP = PretestEP

Table 10. - Test statistics[a]

	PosttestI - PretestI	Posttest - Pretest	PosttestP - PretestP	PostestV - PretestV	PostestEP - PretestEP
Z	-2,739[b]	-2,877[b]	-3,025[b]	-3,022[b]	-2,913[b]
Asymptotic sign(bilateral)	,006	,004	,002	,003	,004

a. Wilcoxon signed-rank test.
b. It is based on negative ranges.

The evaluation by specialists is a prior and indispensable step to validate an intervention proposal, it delimits the scope and limitations for its subsequent correction and improvement, an aspect that allows optimizing resources in a prospective way, (Romero

Mackenzie, 2021; Carchipulla Enríquez, 2021; Rojas, 2021) as the present research evidences in its objective.

CONCLUSIONS

Given the theoretical validation issued by the two independent groups of specialists consulted, it is concluded that the future proposal of intervention with aerobic endurance exercises, oriented to U-14 soccer players, presented an adequate Comprehensiveness, Affordability, Progression, Variety and Progressive Specialization, significantly improving the evaluations of the proposal in its second moment of design. On the other hand, the comparison of the evaluations of national and foreign specialists did not present significant differences, there is an adequate degree of agreement in the theoretical and methodological conceptions of each independent group, an additional value of the proposal presented by the author.

ACKNOWLEDGMENTS

To the Master's Program in Sports Training of the Universidad Central de Ecuador.

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Conflict of interests:
The authors declare not to have any interest conflicts.

Authors' contribution:
Edgar Stalin Almeida Farinango: :Conception of the idea, literature search and review, instrument making, instrument application, compilation of information resulting from the instruments applied, statistic análisis, preparation of tables, graphs, and images, database preparation, general advice on the topic addressed, drafting of the original (first version), review and final version of the article, article correction, authorship coordinator, translation of terms or information obtained, review of the application of the applied bibliographic standard.