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The title : Evaluation of the Explosive force characteristic of arms and legs among the handball players u 19.

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غليظ-وسط14(Traditional Arabic)

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Summary :

Our study aimed to evaluate the explosive strength of the lower and upper limbs in young handball players (u 19 years old) during the preparatory period; using the most commonly used field tests in handball (medicine ball throwing; horizontal and vertical jumping),

Our descriptive study was practiced on a sample of 147 young handball players taken from a population of 287 of the u 19 handball teams who play in (excellence; national 1.2 western region).

From the analysis of the test results, it was deduced that:

- There is a closeness and rapprochement between young handball players under the age of 19 from Algerian teams playing in the advanced divisions in terms of some of the requirements of explosive strength.
- This proximity and rapprochement between young handball players under 19 reflects the great interest shown by trainers in this category for this type of test.

For this, we ask to apply our study on other samples and on other varied notifications in order to show and make appear its effectiveness in all circumstances and all variables.

The key words:

- evaluation; explosive force; handball; category u19

الملخص:

هدفت الدراسة لتقويم خاصية القوة الانفجارية للذراعين والرجلين عند ناشئي كرة اليد صنف أقل من 19 سنة خلال المرحلة التحضيرية، من خلال استخدام أهم الاختبارات في كرة اليد على غرار دفع الكرة الطبية واختبار القفز العمودي لسارجنت والأفقي، وهذا من خلال دراسة ميدانية وصفية على ناشئي كرة اليد ذكور صنف أقل من 19 سنة (17-18) سنة بفرق الغرب الجزائري الناشطة بالأقسام المتقدمة (القسم الممتاز؛ القسم الأول؛ القسم الثاني) للتعرف على مدا التقارب فيما بينهم من حيث هذه الخاصية، حيث شملت عينة بحثنا المقصودة 174لاعبا موزعين على ثلاثة أقسام بفرق الغرب الجزائري من مجتمع بحث يشمل 287 لاعبا لصنف أقل من 19 سنة.

و توصلت النتائج لما يلي:

- يوجد تقارب بين ناشئي صنف أقل من 19 سنة لفرق الغرب الجزائري الناشطة بالأقسام المتقدمة من حيث القوة الانفجارية.

الكلمات المفتاحية: التقويم؛ القوة الانفجارية؛ الناشئين، كرة اليد؛ الذكور.

Introduction:

Similar to other team games, the nature of performance in handball depends on the physical, skill and tactical aspect, which requires the necessity of compatibility with special mental abilities of the team members (Zaki Muhammad Muhammad Hassan, 2006, p27); Hence, sports training aims to reach the player to the highest level physically, physiologically, skillfully, psychologically and schematically tactic, i.e. reaching the sports form that suits each level; Among the possibilities that help to reach higher levels are the integrated preparation of sports training; As the athlete must be prepared comprehensively, balanced and integrated in the training process in order to achieve the highest level allowed by his abilities and preparations, it is necessary to take into account many aspects in his preparation, including physical, skill, tactical, psychological and educational (Amer Fakher Shaghati, 2014, page 262).

The Explosive power is one of the most important components of the power trait that occupies a great place in handball, linking strength and speed. To extract the ball from the opposing player, and all this requires great strength and a very strong muscular effort (Ahmed Oreibi Odeh, 2014, 119). 119; not only that, but even the goalkeeper desperately needs this physical characteristic, by jumping to repel balls shot in the upper corners of the goal, or dropped shots, or when long passes in the lightning attack or when he is involved as a player in some offensive situations, which is very important for the goalkeeper's performance, especially for For the two legs and arms (Raed Abd Al-Amir Al-Mashhadi; Nabil Kazem Al-Jubouri, 2014, p. 159).

Since the idea of measurement in handball reflects the amount

of levels that players have in the physical, skill and tactical aspects of the game (Kamal Abdel Hamid Ismail; Mohamed Sobhi Hassanein, 2001, pages 27-28), the evaluation of its various types, which is considered the mainstay, is of great importance. The main purpose is to identify the extent of development and progress of the level of performance, as it accompanies all stages of training until it has become an important part in the training systems and programs in the sports field -20%-. And the methods and causes of treatment (Kamal El-Din Abdel-Rahman Darwish; Qadri Sayed Morsi; Imad El-Din Abbas Abu Zaid, 2002, p. 354).

From here, and in light of these data that prove some of the importance of evaluating the requirements of achievement and competitive performance, especially the explosive power of handball players for the coach and players, and given our interest in a class under 19 years of age in the field of handball because of its importance in the training ladder directed to building an integrated base formation in order to reach for the best levels of performance and achievement, The problem of our study, which was inspired by the field reality, crystallized, where we went to research one of the aspects and field problems that coaches face, which is evaluating one of the most important physical competitive performance requirements, which is the explosive power of players under 19 years old for the Western Algerian teams active in the advanced sections (Second National Division The first, the excellent), which represents the best teams for this side, in order to identify the extent of convergence and homogeneity between the players in terms of this indicator, and from it setting thresholds (deficiencies, minimum according to the averages) for the level of players that coaches can rely on in classifying their players in the future, our main question was As follows:

- Is there a convergence between the level of handball player under 19 for the western Algerian teams active in the advanced divisions in terms of explosive force?

In order to answer this question, it was necessary to answer a number of the following sub-questions:

- Is there a convergence between juniors of the same level in terms of explosive power?
- Is there a convergence between the juniors of the three levels in terms of the explosive power characteristic?

And from it, we assumed that there is a convergence between the level of handball juniors under 19 years old for the western Algerian teams active in the advanced divisions in terms of explosive power?

2. Research procedures:

1.2 Research sample:

Our intended sample included players from a research community that includes players under 19 years old for 11 teams from the Algerian West and activists in the advanced sections of the Algerian championship (Excellent Division, First Division, Second Division). The research sample consisted of 147 players out of 287, so they were distributed as follows:

Distribution of sample players and the research community:			
Sections	**Excellent Section**	**First Section**	**Second Section**
Research sample	**33**	**31**	**110**
Research community	**49**	**46**	**192**
Percentage	**67.34%**	**67.39%**	**57.79%**

2.2 Search Tool:

We used the most important explosive force tests along the lines of:

Pushing the medicine ball from the front of the chest to the farthest distance (measuring the muscles of the arms).

- Long jump of the tibia (legs muscles).
- Jumping up with the feet using the magnetic board or using the Elacon belt (measuring the calves) (Amer Fakher Shaghati, 2014, p. 299) Sargent.

Statistical means: We have relied on a number of statistical methods that fit our research: they are as follows:

- A- Fisher's analysis of variance "P" test: (Marwan Abdel-Majid Ibrahim, 1998, p. 89)
- B - P homogeneity

C- Student test.

3. Presentation and discussion of results: Presentation, analysis and discussion of the results of explosive force tests:

• Analyzing the results and comparing them with the hypotheses:

By presenting the results of Table No. 02, it was found that there is a convergence between the juniors of the sample in terms of explosive power (lower members; arms). There were no statistically significant differences between the juniors of the sample teams. The juniors of the

second division and among the teams of the three divisions, the calculated Fischer was smaller than the tabular ones, and this is true for the prediction of our assumption that there is a convergence between the juniors in terms of explosive power, whether within one level or between the three levels.

Arms explosive strength test				Lower limb explosive force test				the number	The Indications / the teams		
Medical ball throw test 2 kg from standing		Medical ball throw test 2 kg sitting		horizontal jump test		Sargent test					
^2p	x	^2p	x	^2p	x	^2p	x				
12555.88	**784.41**	4568.38	584.41	818.01	**231.47**	**68.76**	**44.52**	**17**	**saida**		**Excellent Section**
6622.91	**783.12**	3989.58	571.87	747.39	**221.06**	**49.59**	**42.43**	**16**	**oran**		
0.03		**0.54**		**1.06**		**0.78**			calc	T Student	
2.03		**2.03**		**2.03**		**2.03**		**95%**	tab		
31		**31**		**31**		**31**			Deg-fr		
no significance		no significance		no significance		no significance			indication		
9278.09	**799.33**	**2380.95**	**556.66**	**849.52**	**219.33**	**26.38**	**42.56**	**15**	**meghnia**		**First Section**
5158.33	**788.75**	**3473.33**	**562.5**	**815.72**	**216.56**	**29.42**	**42.31**	**16**	**Ain tadles**		
0.34		**0.30–**		**0.39**		**0.18**			calc	T Student "	
2.04		**2.04**		**2.04**		**2.04**		**95%**	tab		
29		**29**		**29**		**29**			Deg-fr		
no significance		no significance		no significance		no significance			indication		
8940.39	**807.56**	**5272**	**574**	441.66	**223.75**	**45.85**	**45.62**	**16**	**tlemcen**		
6371.97	**774.72**	**5679.11**	**553.94**	972.58	**222.33**	**45.41**	**38.33**	**18**	**mascara**		

8143.12	**781.06**	**3012.91**	**555.62**	523.33	**215**	**37.42**	**43.31**	**16**	**sfizef**	**Second Section**
3606.66	**790.66**	**3023.09**	**596.33**	558.80	**216.33**	**31.38**	**41.66**	**15**	**Oued sli**	
6668.13	**777.14**	**7029**	**578.21**	601.80	**215.5**	**34.02**	**41.21**	**14**	**ghelizan**	
3193.22	**772.81**	**6312.39**	**558.43**	595	**218.75**	**56.29**	**41.18**	**16**	**Es–senia**	
9454.28	**801**	**4509.52**	**578.33**	480.69	**227.53**	**47.26**	**43.53**	**15**	**mesreguine**	
0.44		**0.82**		**0.57**		**2.08**			calc	analysis variance
2.18		**2.18**		**2.18**		**2.18**			tab	
(**103؛6**)		(**103؛6**)		(**103؛6**)		(**103؛6**)			Deg-fr	
no significance		no significance		no significance		no significance			indication	
9382.85	**783.78**	**4194.79**	**578.33**	787.25	**226.42**	**58.75**	**43.51**	**33**	**Excellent**	**Variation between sections**
6937.84	**793.87**	**2856.55**	**559.67**	806.29	**217.90**	**27.05**	**42.48**	**31**	**First Section**	
6419.35	**786.20**	**4537.34**	**569.95**	590.77	**219.97**	**45.36**	**42.06**	**110**	**Second Section**	
0.13		**0.66**		**1.03**		**0.60**			**calc**	analysis variance
3.04		**3.04**		**3.04**		**3.04**			**tab**	
(**171؛2**)		(**171؛2**)		(**171؛2**)		(**171؛2**)			**Deg-fr**	
no significance		no significance		no significance		no significance			**indication**	

Table No. 02: shows the comparison between the difference between each sample separately and the three samples in terms of explosive force tests.

General conclusions:

- There is a convergence between the juniors of the under-19 category of the Western Algerian teams active in the advanced divisions in terms of some explosive power during the preparatory stage.

- The closeness between the juniors in this feature reflects the great interest that the trainers of this class give to this type of tests.
- The results highlighted some indicators and figures that coaches can rely on in choosing their players and directing them to specialize through their evaluation and comparison of the results with the results of our research.

4- Recommendations:

- Benefiting from the research results reached by resorting to them as a criterion for selecting and directing young people.
- We hope to apply these tests to a wide field in the discovery and selection of handball players with no side.
- Relying on and expanding the results obtained in our research in order to build standard levels in each indicator of performance requirements to facilitate the work of coaches in the field in evaluating their players.
- Continuous training of trainers in this field to keep pace with developments in the field of measurement and evaluation on the one hand and the importance of measurement in the correct guidance of the athlete for the appropriate specialization and saving time on the other hand.
- We recommend researchers to search more in this category, because of its importance in sports training, with the application of our proposal with different samples and other variables to prove it more through continuous experimentation based on scientific foundations.

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